A COMMUNITY AT THE CROSS-ROAD

BY

SAPUR FAREDUN DESAI

AUTHOR OF PARSIS AND EUGENICS,
A CHANGING SOCIAL STRUCTURE. etc.

With Foreword by
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And Introduction by
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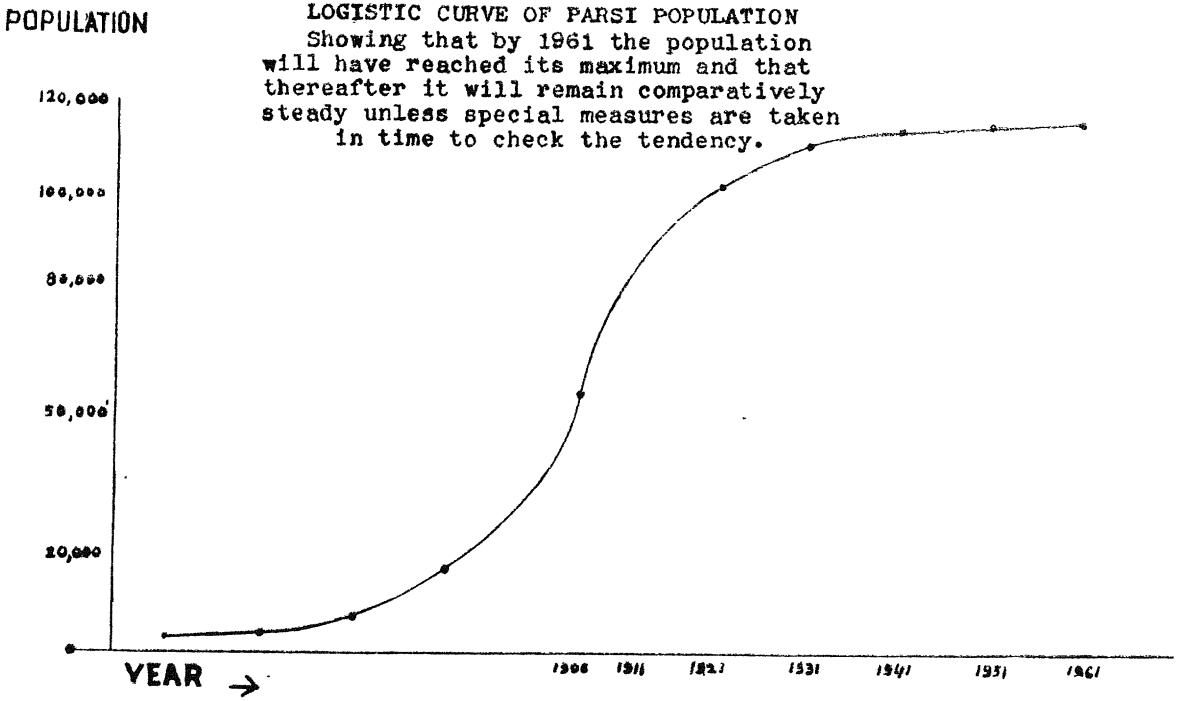
To

My Parents

Fig.1.



LOGISTIC CURVE OF PARSI POPULATION
Showing that by 1961 the population will have reached its maximum and that thereafter it will remain comparatively steady unless special measures are taken in time to check the tendency.

PREFACE

The Parsi community is small and can lend itself readily to a study of its population problems. I have endeavoured to give in this book some idea of the problems facing the community but an effort on a larger scale is necessary. As a preliminary to that proper data must be made available and they can be had only from Census Reports which are at best inadequate in that regard. If the Parsis foot the bill government might make it possible to collect data relating to Parsis in the 1951 Census. Fertility is the vital subject which demands our first attention. Diseases and infirmities may follow next with special reference to diabetes, asthma, tuberculosis, insanity, feeblemindedness, blindness and deafmutism. It will be only when we have comprehensive data that we will be able to have a clear picture of problems staring us in the face. it will only be then that we shall be in a position to assess and evaluate our socio-biological problems and devise methods to meet them. In the meantime it is hoped the present work will give a fair idea of what is happening to and what is in store for the community. Wherever possible or necessary the author has given references to Indian and world problems of similar nature so as to make the reading useful to a larger public.

I am deeply grateful to our veteran leader Sir Homi Mody for his masterly Foreword. As an able administrator, businessman, politician and statesman Sir Homi occupies a unique place in the affections of the Parsi public. His words—clear, pointed and homethrust—compel community's attention. His suggestions on education, religion, etc. are worth serious consideration by the Parsi public. His advice in the penultimate para is most appropriate and let us hope population arithmetic will engage the attention of the leaders for some years to come.

Prof. J. J. Asana, to me a guide, philosopher and friend, has contributed an able Introduction. As he puts it, it is time we gave up patch-work methods of social uplift and took to socio-biological methods which attack the roots and not touch the problem superficially. My thanks are due to him for his constant advice and guidance.

My thanks are also due to Prof. Dr. Gyan Chand of the Patna University for having gone through the first typescript and giving valuable advice which has been acted upon with advantage.

To Mr. M. Telang my and Parsi community's thanks are due for having fitted the logistic curve to the Parsi population data. The curve appears on the frontispiece and Mr. Telang's explanatory note in Appendix A (Chapter II, p. 45), both of which must exercise the mind of the thinking public. So far as an Indian community is concerned the logistic given herein has been attempted for the first time.

My friend Mr. Dara F. Bharucha has taken great pains to prepare the final typescript, read proofs, mind the layout and carry out many other self-assigned tasks most cheerfully, for all of which I am greatly beholden to him.

A host of others have assisted me in the preparation of the first typescript and I cannot but mention the names of my friends Mr. Jamshed S. Khambatta who very willingly undertook transcription of the manuscript and Mr. Sorab E. Sidhwa who prepared basic tables with so much care and patience.

Last, but not the least, I am completely beholden to my wife for constant inspiration to work on this problem and for creating all facilities to lighten the burden.

If this book acts as an eye-opener to the Parsi community or as a fillip to any other community similarly circumstanced to face a socio-biological exposition of its skeletal make-up, my efforts will have been rewarded.

Rele Chambers,
Raghaoji Road,
Cumballa Hill,
Bombay, 26.
November 1st, 1948.

S. F. D.

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FOREWORD

The problems facing the Parsi community have been the subject of a great deal of study and discussion in the last few years. The major ills afflicting the community have been diagnosed more or less correctly—insanitary housing, an ill-balanced diet, indifference to the laws of health, steadily increasing pauperization, unemployment, a falling birth-rate, a false standard of living and the like—but a scientific study, such as Mr. Desai has made, stands in a category of its own and reflects great credit on the author. No plans for the betterment of the lot of our people can succeed, unless statistical material is available and research conducted into the fundamental causes which have brought about a decline.

The broad facts that emerge from any consideration of the problem are that a deterioration in the moral fibre of the community has set in. We have an idle rich class, contributing little to the general wellbeing of the community beyond indiscriminate charity, and our poor are getting poorer and losing their self-respect. There are many individuals and agencies at work amongst the poorer sections, but their efforts are disjointed and we can see no signs of a definite recovery. Substantial sums are being poured out year after year, and one would have thought that, with so much of the humanitarian spirit in evidence, the future was full of hope.

I do not feel myself competent to express any clear-cut opinion on the measures that are necessary to set things right, and the few observations I have to make may be regarded by some as stressing the obvious. It seems to me, however, that the education of our children, in spite of all efforts to improve it, is not yet on the right lines. The boys and girls of our community are herded together in a few schools, where attention is paid to their curriculum, and in some respects to their physical wellbeing, but where the building up of character is more or less neglected. Adequate preparation for the rough and tumble of life is lacking, and I am not sure that our children are not being schooled into a state of helpless dependence, which increases with the years. How that is to be remedied is for those who are in charge of the education of our children to suggest. It may be well worthwhile, for instance, to have a conference of Parsi teachers, particularly those in charge of purely Parsi institutions, for discussion of the problem, and to have a standing committee set up, charged with making recommendations from time to time for the improvement of the upbringing of pupils at the most impressionable stage in their career. The inculcation of a spirit of self-respect and self-reliance is very badly needed, if our poor are to be roused from the paralytic state into which they seem to have fallen.

Another direction in which the community can be helped is by the eradication of the religious fanaticism which has seized large numbers of it, and which is actually fostered by the manner in which social and religious questions are debated in public. This is a matter in which a correct and courageous lead by the elders of the community and by the Parsi press can help a great deal, but there is unfortunately too much of a disposition either to fight shy of the situation, or to exploit the passions and prejudices of the masses.

Some of the remedies suggested by Mr. Desai are of a radical character, such as selective mating and the sterilization of the unfit, but he has put out many ideas which are worthy of earnest consideration. We have a number of workers who are unselfishly, and amidst much discouragement, devoting themselves to the uplift of our people, and it would be worth their while to study this very thought-provoking publication which Mr. Desai has compiled.

India is on the threshold of revolutionary changes in her social and economic structure. The Parsi community, if it is to retain the position which the labours of a long line of eminent social reformers, politicians and public workers have built up in the past, will need to maintain a generally high level of integrity and efficiency on the part of its members. It will not do to produce just a handful of men of distinction. Only thus will the community be enabled to survive and make its rightful contribution to the advancement of the country.

Mr. Desai deserves the thanks of the community for the research he has conducted into many of its fundamental problems, and I hope his views will command the respect and attention they deserve.

INTRODUCTION

No thoughtful person would dispute the statement that the basic, fundamental aim of all humanitarian societies in our midst is the removal of distress and suffering, physical, mental and economic from society. All reforms aim at securing and affording social welfare to the masses which would ultimately conduce to solidarity and prosperity of the people.

But it is not so generally realized that a careful study and reliable knowledge of existing state of affairs must precede all attempts at solution of knotty problems. The roots of social illness must be laid bare; the underlying causes from which most of our sufferings and misery, our degeneration and deterioration arise, must first be understood to arrest the influence of social ills and to destroy them ultimately.

This unpretentious, thought-provoking book is perhaps the first serious, scientifically envisaged endeavour to collect data, to obtain and bring together some facts and figures—some of which tell their own tale—with a view to exposing and explaining most of our difficulties and problems and putting them in a proper perspective. It draws pointed attention to a few highly dangerous and subversive but hidden trends which are not only militating against all our efforts for social amelioration but are also undermining the coherence, the solidarity, the stability of our people as a community.

No student anxious to attract and rivet the attention of the leaders of a community to the concealed cankers of the social ailments afflicting the people committed to their charge can afford to remain ignorant of the origin and history of the subject of his enquiry. In giving his admirable historical sketch Mr. Desai has taken pains to draw attention to the numerical changes in the population, to emphasize the vicissitudês to which our community has been subjected in its demography, since a fairly large section of the Parsis began to migrate to the island of Bombay about three centuries ago.

In this and in other respects many readers among our co-religionists will find Mr. Desai's book making a more or less new approach to the problem of social welfare among the Parsis. This is so, because not only among our community but generally speaking in the Western countries too, many reformers are still far from evaluating and truly appreciating the significance of population studies and the importance of some of the findings of biological science in sociological investigations for the increase of human welfare. A greater part of this book and particularly chapters II to V and VII and VIII will undoubtedly help the thoughtful section of our people in gaining some idea of the field of social endeavour called **social biology** which is the application of biological knowledge for the understanding and satisfaction of the needs of man as an individual and a social being. For, some of the teachings of biological science throw helpful light on our problems of health and disease, food, education, marriage and population.

This book also draws attention to the need for other careful investigations with a view to throwing some light on the advisability or otherwise of strictly observing the custom of Parsis marrying the Parsis only and that prevalent custom of cousin marriages which are not unknown to us. Parsis and other more or less compact communities in India, similarly placed sections of the Indian population, in which various degrees of endogamy have been for long and widely prevalent, may perhaps serve as very useful material for investigation. They may be regarded as more or less naturally conducted experiments which, if properly studied, may throw light on the question as to how various degrees of human inbreeding affect the bodily characters, functions and behaviour of succeeding generations of human beings.

Biologists have been carrying out such experiments on plants and animals other than man. They have discovered that resemblances and differences among closely related generations of plants and animals appear in accordance with certain regularities, which they call laws of Heredity, incorporated as a branch of biological science called Genetics. It is also believed that in so far as man is an animal these laws are also operative in the reproduction and generation of man but in a more complicated fashion. Much remains to be discovered in human genetics but we feel inclined to believe that investigations carried out along these lines in our community may not only prove useful in our welfare work but they may also make some contribution towards human genetics.

The author has done well to draw our attention to the fertility differential. If this persists the community a hundred years hence should not be surprised to find much of the third rate population preponderating. Our population arithmetic discussed in this book therefore needs a close study. The logistic fit (Fig. 1) is yet another pointer of our downgrade movement. This tendency must be arrested in time.

Mr. Desai, despite his multifarious duties and in circumstances none too favourable for study and investigation, has worked hard and admirably in a pioneer effort to draw attention to these and many other fields of social research which may prove of vital interest and lasting benefit not only to the Parsis but to the other sections of the Indian population as well if they have a similar origin and history. The author has rendered remarkable service to his community. We all feel grateful to him for his labours and the effort he has been making to point the way to those researches and investigations which, if properly carried out, may yield results of value, so far-reaching in their influence as to make our present-day social endeavour for the regeneration and uplift of our community look like mere patch work.

JEHANGIR J. ASANA

CHAPTER I.

A RETROSPECT.

Parsis not an Indigenous Race:

The Parsis of India are not an indigenous race in the purely anthropological sense of the term. Their home was Iran from where they migrated to India in the 8th Century after their empire had been lost to the Saracenic hordes. Ere that the Persians were proud of a great civilisation. From the moment man entered into the dawn of history down to the fall of the Sassanian Empire in the middle of the 7th Century, a galaxy of illustrious kings ruled over Iran. The Shahnameh speaks of five great dynasties and history is replete with heroic deeds of great kings, generals and warriors. Cyrus, Cambyses, Darius, Xerxes, Sam, Zal, Rustom, Sorab are some of the names of kings and warriors whose names are to be conjured with. Their exploits brought them the greatest rewards, made them masters of the seven seas and overlords of a large territory of the world. Their achievements are mirrored in the monuments that are being uncovered by the spade of the archaeologist. Their civilisation was second to none if not superior to any; their culture was on par with several superior cultures before the Christian era began. More than 3000 years ago Zoroaster propagated his religion based on **Good Thoughts, Good Words and Good Deeds.** The Parsi community of India still follows the same precepts and is jealous of its traditions and heritage. But it would appear this great religion was not destined to continue in its country of origin and the millions were foredoomed to perish or to embrace Islam. In a beautiful passage Gibbon (35) describes the defeat of the Persians at Cadesia as under:—

"After the defeat of Cadesia, a country intersected by rivers and canals might have opposed an insuperable barrier to the victorious cavalry; and the walls of Ctesiphon or Madayn, which had resisted the battering rams of Romans, would not have yielded to the darts of Saracens. But the flying Persians were overcome by the belief that the last day of their religion and empire was at hand; the strongest posts were abandoned by treachery or cowardice; and the king, with a part of his family and treasures, escaped to Holwan, at the foot of the Median hills."

Three months after the battle the royal palace was taken. The barbaric Arabs, as Gibbon puts it, were overjoyed and "the naked robbers of the desert were suddenly enriched beyond the measure of their hope or knowledge." The noted historian goes on to give a touch of grim humour to the tragedy and says that the camphire used for illuminating the palace was mistaken for salt and eaten by the Arabs with their bread, its bitter taste causing astonishment to the barbarians. The religion was doomed in its own country and the hearts of the populace were filled with despair. The disruption had begun which was to hail a new era in the life of the Zoroastrians. A new chapter was to be written in a different clime and country after an epoch of toil and travail.

Pre-Exodus Connections with India:

Before the Khorasanis, the progenitors of the present-day Parsis, left their motherland finding it impossible to practise their religious tenets before the truculent, intolerant Arab, there were some Parsi settlements in India, and though not big they were at least appreciable. Haug's Essays, Elliot's History, Reinaud's Memoirs Sur l'Inde, Troyer's Rajtarangini, Rawlinson's Ancient Monarchies, Wilson's Ariana Antiqua, Masudi's Prairies d'Or, Hodiwala's Parsis of Ancient India bristle with references to Iranian connections with Hindu India before the great exodus. The Parsi forbears traversed the seas and landed on the ever hospitable shores of India some twelve hundred years ago, where they have stayed as peaceful children of the soil and have played no mean a part in the rise and prosperity of their land of adoption. As to where they first landed and how they disseminated or infiltrated inland is a controversial subject with the Parsis even after hundreds of years of stay and an attempt is even made from certain quarters to discredit Kisseh-Sanjan, but that does not concern our present inquiry. Dr. M. B. Davar, an authority on Iranian subjects, puts forward the theory that our ancestors lived in Tabaristan for about 200 years after the fall of Yezdegard and came to India after making sure that they would be welcomed somewhere in the middle of the 9th Century after Christ. Unvala, another noted scholar, supports this view (91). Suffice it to say that the Parsis came to India from Iran more than a thousand years ago and are since then there.

The Parsis are mainly to be found in Gujarat since they first entered India by her western boundary and it is from this reservoir of Parsi population that we draw the present supply of the Parsi in any conceivable or inconceivable part of the world.

Rise of Parsi Synchronous with that of Bombay:

The rise of the Parsi is synchronous and synonymous with the rise of Bombay. The inverse may even be partially true. The Parsi can claim a legitimate share with other communities in the rise of *urbs prima in Indis.* Bombay has had a very peculiar history. Four hundred years ago it was made up of a group of seven islands and perhaps hundreds of years ago it had a luxuriant forest which can be gathered from the fact that when the Princes Dock was laid a submerged forest was revealed (Edwardes, 28a) and even when Bombay began to be populated stretches of trees were a regular feature. The climate was in no way salubrious and the early Hindu kings, notably the Silharas, had their seat of government on the Elephanta, a neighbouring island, then known as Puri or Gharapuri. The early foreigners to arrive, apart from the orientals, travellers and tradesmen, were the Portuguese, who began their career almost with the incredible zeal of bigoted missionaries to convert the native pagans, mostly Kolis, to the Christian faith.

In 1661 King Charles II of England entered into a marriage treaty with the Infanta of Portugal whereby the Port and

Island of Bombay, over which the Portuguese held sway, was made over to the King of Great Britain. Later it was leased to the East India Company for a paltry sum of £10 a year and in 1858 formed part of Her Majesty's dependency when India was absorbed by a Royal ukase forming the brightest 'jewel in the British Crown.'

First Arrivals:

The first Parsi to arrive in Bombay was one Dorabji Nanabhoy who founded the family of Patels (Vatchha, 92) in 1640. But perhaps there were Parsis on the island, ere this, notably on the island of Bassein. Garcia da Orta, a Portuguese physician, who owned the Island of Bombay in 1554 speaks of the Parsis in his Colloquios as under:—

"There are other shop-keepers who are named Coaris, and in the kingdom of Cambay they call them Esparcis, and we, the Portuguese, call them Jews: but they are not Jews, they are Gentiles who came from Persia, have their own characters, " etc. (Edwardes, 28b).

This shows that there were Parsis before 1640 and though actually not in Bombay proper, at least round about Bombay on one of the islands, notably Bassein, before the ingenuity of man filled up the creeks and basins and joined up the seven islands, the Heptanesia of Ptolemy, to make what is our present beautiful Bombay.

Early Population of Bombay:

But the rise of the Parsi in Bombay can be safely stated to date from the latter half of the 17th Century and soon after the advent of the British. Prior to 1661 there were no tangible records of Bombay population. According to Dr. Fryer the Bombay population in 1675 was 60,000, "more by 50,000 than the Portuguese ever had." This is taken to mean by Edwardes (28b) that in 1661 the population must have been 10,000. The writer of Gazetteer thinks that 'one or two Parsis also may have been resident in Bombay in 1661, though their number did not appreciably increase till after 1670.' From the footnote it appears Edwardes relies on Parsi Prakash I, 14 which states that the first Parsi to arrive was Dorabji Nanabhoy in 1640. By 1670 the number of Parsis had so increased that a Tower of Silence and an Agiari had been necessitated, a sure sign of prosperity in point of population and wealth, a sign noticeable even now. In that year the first Dokhma was built on Chaupatty hillock and an Agiari at Mody Khana by one Mody Hirjee Vatchha, the former of which still stands but the latter was destroyed by the great fire of 1803. By 1715, the population of Bombay had dwindled to 16,000 and Edwardes attributes this to 'the ill-effects of a pestilential climate' and to non-safety of life due to rivalry between the Marathas, the Moghuls and the Portuguese. However the careful internal management, a good foreign policy and great progress of Bombay were responsible for a population of 70,000 in 1744. Edwardes says there were some Parsis too and gives two noteworthy names of Rustom Dorab and Lowji Wadia. The former was famous as 'General' Rustom on account of his military prowess in driving out the Sidis of Janjira and the latter was a Master Boat-builder who came to Bombay in 1736 as a boat-builder and was later induced to bring his family and settle permanently. He left numerous progeny and was responsible for handing down from father to son the hereditary art of boat-building. No less than eight of his descendants held the post of Master Boat-builders until British jealousy drowned the art leagues below in the Bombay waters about the close of the last century and drove the genius underground. Some others who had settled in Bombay in the thirties of the 18th Century were Muncherji Jivanji, the ancestor of the present house of Readymoneys; Camaji Cooverji, the founder of the Cama family; Maneckji Naoroji Sett, the ancestor of the Setts of Bombay, *et al* (Edwardes, 28b). The first ancestor of the Setts according to Vatcha (92) was one Bomanji Rustom Manek who arrived in Bombay in 1723.

Early Records of Parsi Population:

The first actual record of the Parsi population of Bombay is to be found in the record submitted by the Grain Committee of 1780. Apart from the population of Mahim which contained

13,726 persons and no Parsis, the main land contained a total population of 33,444 with a Parsi population of 3,087 (1,583 men, 1,308 women, 196 children), i.e. nearly 10% on the main land and 6½% on the whole (Edwardes, 28b). Captain Basil Hall, R.N. in his Fragments of Voyages and Travels (quoted by Edwardes, 28b) puts down the Parsis at 13,156 out of a computed total of 236,700, about 5½%, in 1812. If we however take the fixed population of Bombay viz. 159,988 barring troops and the migratory population, the Parsis would form 8% of the total population.

In 1813 the Fort survey was taken and Edwardes says that out of a total of 10,801 living within the walls, there were 5,464 Parsis, i.e. nearly 50%. In 1826 a census of Fort, Dongri, Byculla, Mazagon, Malabar Hill, Girgaum, Mahim and Colaba was taken and its results submitted by Major T. B. Jervis, F.R.S., in 1839-40 to the Bombay Geographical Society (Edwardes, 28b). At that time the Parsis were found to be 10,738 out of a total of 162,570. Evidently this does not appear to be a complete census of the Island. In 1830 Lagrange estimated Bombay population to be 230,000 and added 6,000 more 6 years later. In 1846 yet another estimate was made when the Parsis were recorded to be 114,698 out of a total of 566,119, apparently an overestimation recognised by the Bombay City Gazetteer. Actually the Parsis reached this figure nearly 100 years later. We believe it is not an overestimation but there is some mistake somewhere, either in the original script or in the printer's proof. If we drop any one figure, either on the right or on the left—and it would be more appropriate if we dropped '1' on the left—we would get a correct figure, viz. 14,698. Even if we do that the grand total remains fairly big, viz. 566,119. Between 1830 and 1836 a rise of only 6,000 was recorded. To expect the population therefore to double itself in another 10 years without any extenuating or favourable circumstances is too much and we may take it that all the figures are falsely enumerated or estimated and that therefore they are in no way reliable.

This brings us down to 1863 when the Census Act (II of 1863) was passed. Between 1861 and 1865 America passed through the throes of a rebirth, the civil war. This war, though fought thousands of miles away and in the New World, had its repercussions even in those days of slow movement on an infant city like Bombay. The cotton prices began to soar up and the trade of Bombay attracted all sorts of elements. The population began to swell not unaided by the first railway lines (G.I.P. Rly. and B.B. & C.I. Rly.) which were laid between 1853 and 1864 so that by 1865 the population had increased to 816,562. The catchword of the historian of those days was 'Share Mania,' a disease which brought ruination and degradation to many a fine family including some well-known Parsis.

By 1872 a decrease of the population was noticed and by an actual census it was found that the population was 644,405, the Parsis comprising 44,091, a little under 7 per cent (6.84) of the total population. It is a well-known characteristic of the Parsis that they never move singly; they always bring with them their wives and children, nay even their whole families which in those days were joint families. From the first attempt at censusing in 1780 down to the present day the Parsis have been nearly equal in point of their sex composition, which fact proves what we are suggesting.

From Conjecture to Modern Method of Computation:

The closing decades of the last century brings us from the land of conjecture, unscientific enumeration and flights of imagination to the relatively stable domain of statistical exactitude. Yet another census was taken in 1881 when the Bombay population was 773,196 the Parsis being 48,597, i.e. 6.20% of the total population. Since then in the first year of each decade a census is being taken. Thus in 1891 Bombay recorded a population of 821,764 with Parsis as 47,458, i.e. 5.7 per cent of the total population. The fall in percentage of the Parsi population has been all along noticeable but in the last century it may be best to attribute it to the growing consciousness of other communities to flock to a prospering city. The year 1896 heralded plague, the most dreaded scourge of people, and hoisted a regular storm signal. Thousands perished and a great part of the population left the city. In less than 5 years the population had so dwindled that in 1901 the total population was recorded to be 776,006, roughly 3,000 above the population of 20 years ago and nearly below by 46,000 of the population 10 years ago. The Parsis had gone down only slightly from 47,458 to 46,231. In the opening years of the century the confidence in the health of the city began to return and, as the residents of a valley return to their lava-scorched but fertile lands after the subsidence of a volcanic eruption, the people of Bombay once again began to flock to the city. By 1906 (Dr. Turner's Census) the population was recorded to have risen to 977,822, Parsis comprising 48,824, i.e. just about or a little less than 5% of the total population. The fall in ratio of Parsi population to total population can be noticed even before the beginning of this century.

Let us recapitulate. We have no tangible records of the number of Parsis in Bombay prior to 1780. In that year they were first observed to be 3,087—1,583 men, 1,308 women, 196 children. We have no quarrel with the first two figures but surely with the last. Perhaps for centuries the Parsis have displayed a nearly equal sex ratio but the number of children shown is too small and inexplicable. We can conclude one of three things: (1) that the children were not properly enumerated; or (2) that the maximum age of 'children' must have been kept so low as to include those above it in the class of men and women; or (3) that the Parsis must have been keeping their children with the remaining members of their family in their native towns or villages for various reasons like health, education, non-safety of travel, etc. By 1812, that is, in three decades after the first enumeration the Parsis had increased by 10,000 more. It is undoubtedly true that within this period Bombay had grown in importance as a maritime town on account of its greater suitability than the old Surat Port which had begun to decay on account of man's changing loyalty with change of fortune and on account of various natural calamities like fire, floods, rapine, etc. The survey of 1813 would show that the Parsis were nearly 40% congregated in Fort, which was fast becoming an unhealthy area on account of its walls.

Birth of the Parsi Panchayet:

Nineteenth Century was an era of security and the early Parsi settlers of Bombay displayed marked sagacity in taking measures of consolidation and safety of the community. In 1787 the Bombay 'government' issued instructions to form a Panchayet to look after and settle internal disputes and manage affairs of the community. Principally the British came to trade. Therefore, that was their first concern. And, good trade follows good government. Because they were foreigners, they perhaps wanted to avoid the mistake the erstwhile Portuguese had committed in interfering with religious and communal affairs of the natives. They therefore allowed them to have their own Panchayet. Anyhow rightly speaking the word 'Panchayet' dates back to 1787 when '12' persons and not '5' formed the council, which number came to 18 in 1818[1], to 4 in 1824 and ultimately 5 in 1851[2]. By a scheme approved by the High Court this number changed to 7 in 1911. It would appear that even before 1787 there was a practice of appointing 'choglas' or leaders of each community, elected by its own members and this practice seems to date back, as far as Parsis are concerned (Modi, 69) to the year 1673, i.e., the beginning of the second decade of the British occupation of Bombay. About the close of the 17th Century, it appears, there was a regular Panchayet with a code of its own for civil and internal administration. By the close of the 18th Century the organisation had become an established, accredited, revered body of the Parsis. Trade flourished, many Parsis began to be educated in western ways and in the first quarter of the 19th Century the seeds of the present Panchayet were sown. Among the first progenitors was Jamsetjee Jejeebhoy, who later became a knight and two years before his death in 1859 the first Parsi—and consequently Indian—Baronet of that name. Although the administration of the Panchayet of the second quarter of the last century came under the trenchant attack of Manekji Cursetjee, a Judge of the Small Causes Court, who wrote in 1844-45 in the "Bombay Times" under the pseudonym of Q in the Corner a series of letters entitled "The Parsi Panchayet: Its Rise, Its Fall and the Causes that led to the same," there is no gainsaying the fact that the Bombay Parsis were prospering and this attracted many more Parsis to Bombay. Thus by 1872, that is 30 years after the last census, the community had increased by 3½ times. Since then the rise has been steady and more or less natural upto the end of the century. Karaka (50) says that according to the census of 1881, 70% of the Parsis were born in the city, 22% coming from the old home in Surat and the rest from other parts of the country. There were setbacks in the closing years and, as we have seen above, it was in 1906 that the Parsis came back to their former figure of 1881. Table I shows the Parsi population between 1872 and 1906.

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[1] Vide letter dated nil by Q in the Corner to the *Times of India* published between 9th and 18th November, 1844.

[2] J. R. B. Jejeebhoy, The Communal Discipline amongst Bombay Parsis in Olden Times, M. P. Khareghat Memorial Volume (Unpublished).

TABLE I

Total population in Bombay, Parsi population and its percentage to total population.

Year	1872	1881	1891	1901	1906
Parsi population	44,091	48,597	47,458	46,231	48,824
Total population	644,405	773,196	821,764	776,006	977,822
%age of Parsi population to total population	6.8	6.3	5.7	5.9	4.9

According to the census of 1881 there were 85,397 Parsis in India out of which 48,597 i.e. 57% lived in Bombay. They had exhausted their number which could be drawn from the rural areas and the law of diminishing returns had begun to apply. From 1872 to 1906 the percentage ratio has consistently decreased. There is one interesting sidelight to this percentage. Although many Parsis and other communities left Bombay in the closing years of the last century on account of plague, the percentage in 1901 has actually shown a rise by 0.2 over the last decade. It may be that relatively more of the other communities ran away presumably due to ignorance and lack of organisation, whereas the Parsis stood firm except for a thousand or more of them mostly perhaps women and children. This is amply borne out by the fact that the Parsis took effective steps as suggested by the physicians, opened hospitals, segregation camps, etc. and left nothing undone to adopt prophylactic treatment.

Pioneering Parsi Enterprise:

From 1825 onwards trade of Bombay began to expand. American cotton prices soared high and England began to buy Indian cotton. Bombay Chamber of Commerce came into existence in 1836 and the first cotton mill was started by an enterprising Parsi named Cawasji Nanabhoy Davar in 1854* According to Edwardes (28b) Davar projected the mill in 1851 and got it working in 1854 under the name of Bombay Spinning and Weaving Co. This was followed by another mill again sponsored by a Parsi under the name and style of Manekji Petit Manufacturing Co. The second Silk Mill in Bombay which started work in 1898 was started by a Parsi under the name of Chhoi Silk Mill. Another big Indian industry is the Iron and Steel Industry. Although attempts had been made since 1825 to start such mills in India it was left to the foresight and genius of a Parsi from Bombay, Jamshedjee Tata, and a big plant on a commercial scale was brought into existence at Jamshedpur, now known as the Tata Iron and Steel Co. Ltd. Godrej & Boyce Mfg. Co. is a byeword with those who use safes, almirahs, etc. Godrej soap is not unknown. Parsis have even been associated with the promotion of foundries and workshops of small and big calibre. Cotton presses and ginning factories were once largely owned by Parsis in Gujarat from where most of the cotton came to Bombay. One of the leading doctors in the closing years of the last century was a Parsi, Dr. Kaikhasru Bahadurji, whose name is now intimately connected with the treatment of tuberculosis in a Deolali Sanatorium. Dr. Dadabhoy Navroji, again a Parsi, was the first to enter Parliament and lay the foundation of Indian Independence Thus when Bombay was in the making in the last century it was not without its enterprising, adventurous intelligent brains, and so many of them were Parsis, not to speak of those numerous merchants, traders, businessmen, bankers, brokers, financiers, educationists and so on, who have helped to build the Bombay of today.

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* Indian Year Book, published by the *Times of India*, 1943-44, p. 686.

Development of Parsi Codes & Laws:

With the advent of stable government by the British the necessity of a regular code of inheritance and of marriage and divorce was felt. In the year 1835 an inquiry was instituted by the Bombay Government and entrusted to the care of Harry Borradaile, Registrar, Sadar Adawlat, Surat.[1] This inquiry resulted in the enactment of Act IX of 1837, but it was soon found to be wanting and in the latter half of the fifties of the last century a law committee was formed to revise the law and draft a suitable amendment. Maneckjee Cursetjee in a letter addressed to the Hon'ble P. W. Legeyt on 28th October 1859 describes the work of this committee as the mountain in labour which they have been at for the last 3 or 4 years and then winds up his letter with an apt delineation of the Parsi characteristic as under:—

> "When you asked me two years ago what the Parsi Law makers were doing, I wrote to tell you then that 'they have neither materials nor heads' to fabricate a constitutional code based upon any sound principles of law-making, and ever since they have been, as they are now, at sixes and sevens."

Social progress is usually a resultant of strife and strain. Whether it is preceded by constitutional criticism or unparliamentary polemics, the final outcome is a progress of some kind. The Parsis more or less followed this universal line. In 1865 Marriage and Divorce Act and the Parsi Intestate Succession Act were passed on the model of the English Laws. Sixty years after that a necessity was felt to amend the laws and a committee known as the Parsi Law Reforms Committee was appointed. It laboured for well nigh ten years and brought forth a piece of legislation which became law in the closing years of the fourth decade of this century.

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[1] Vide Pamphlet setting forth the nature of inquiry, memorials of Parsis of Bombay made in 1835 and subsequent years published anonymously but presumably by Manekji Cursetjee the most trenchant critic of those days in June 1843. This pamphlet is in the possession of my friend, Mr. Ruttonji A. Wadia.

Quarrelsome Tendency:

Sometimes the Parsis are wont to dissipate their energies on extraneous matters while sidetracking real issues. Indeed this characteristic has not been lost sight of by even foreigners. The Kabisa controversy was well known in the 19th Century. What it meant to a foreigner (Stocqueler, 85) can be gathered from the following quotation:—

> "But now came the turning point of my fortunes. The Parsees of Western India had managed to get up a very pretty quarrel among themselves upon the subject of their calendar. Having failed to balance their quadrennial difficulty by a leap-year, for I don't remember how long a period, they were altogether out in their dates. March had somehow got into the middle of September, or January had walked into May, I forget which—and the learned priests did not know how to put matters straight. The Parsees were divided as to the remedy. Some were for an intercalary month—others for a different arrangement. Anyhow the dispute waxed hot. The disputants separated into distinct factions, one of which called itself the **Kudmees,** the other (I think) **Rusmees.** The **Moonshees** fostered the quarrel. All the doctrines of Zoroaster and the decrees of Zendavesta were cited and twisted with the facility with which Shakespeare tells us the devil can quote Scriptures for his purposes. There was a **moonshee** from whom I had taken some lessons in Hindostanee. He interested me in the dispute, and asked me to insert his (of course the orthodox) view of the quarrel in my paper. He was convinced that it would create a great demand for copies. More with the desire of obliging him, than from any expectation that my subscribers would care about the controversy, I gave up two columns to what (to me) was unintelligible farrago. But Dossabhoy was right. His

faction bought the paper by hundreds. The publication brought out the opposition, who certainly had an advantage over their antagonists in the production of a larger and more elaborate statement. Was I chained to the car of the **Kudmees?** No, the Fates forbid. **Audi alteram partem** was the motto of the Iris. The **Rusmees,** or whatever they were, exceeded their adversaries in their generosity. My poor pressman was quite worn out with 500 copies extra—and yet 500 more. The colors of the rainbow glowed. They were vivid especially with gules, the red hue denotative of war. Reply brought rejoinder—rejoinder raised duply. I think the Scotch lawyers call it. At last the subject was worn out without either party being convinced. The public were tired, the priests were prostrated. I remained serene and counted my gains. The Iris had become a force."

The Lesson:

The above may be a fine piece of journalism but in no uncertain terms it shows what dissensions can mean to shrewd exploiters. The Parsis can take a cue from this. They have floated on the rising wave of a capitalistic world. They have moved with the political junta of the day. The times have changed and a change in the policy of the Parsi community is now overdue. Politics is a changing game and it requires adaptability of the highest order to subsist on the top rung. The Parsis possess this quality to an admirable degree. Their tenacious, effective existence these hundreds of years amidst diverse communities is enough proof. With literacy and adaptability, the two best armaments in the life of a community, the Parsis can still score politically. Socially, the Parsi of yesterday formed a small unit and lived more a rural than an urban life. Biologically, the Parsi was a healthy, happy being who believed in a settled, married life with an expanding family. Socio-biologically, the Parsi was a product of culture, tradition, civilisation, religion, temperance, tolerance and other gainful virtues. Today this coherent life is disintegrating. The Parsi has left his usual expansive rural habitat in favour of an ever circumscribing urban life. The tendency is definitely disruptive and uncongenial to a well-knit social fabric. In such an atmosphere the human mind undergoes a severe strain. The spirit of give and take becomes displaced by dissension and discord; that of mutual accommodation in the interest of the whole by intolerance of a section; that of religious fervour by ridicule; that of traditional outlook by a careless disregard; that of cultural preservation by an oblivious disposition; that of inventive ability by an unwitting superimposition of a misfit; that of pleasant relationship by a dislocation of amity; that of virtuous intent by a profanation; that of replacement of the dying genius by a wilful murder of the superior germplasm. A small community can ill afford to indulge in such unprofitable ways of living. Poverty is growing from year to year. A larger number is getting submerged from year to year. A section is growing up in parasitic existence and like every parasite is strangling the host it feeds on. A larger effort than hitherto is now warranted to cement the hiatus and build a superstructure that will endure.

CHAPTER II.

DYNAMICS OF POPULATION.

The World Trend:

Population trend all over the world is a fascinating study. Early estimates, especially those prior to the 17th Century, are all a guess work. Pearl (73) deduces three hypotheses:

1. A steady growth in human population for some 500,000 years, irregular and fluctuating, conditioned by wars, famines, diseases, climatic changes, etc.

2. A stable population standing roughly between 400 and 500 millions or oscillating in waves of small amplitude round about this figure.

3. A much higher population than 400 or 500 millions prior to the 17th Century and then a reduction for reasons wholly unknown till the figure of 445 millions was reached, which is the figure recorded in the middle of the 17th Century.

Pearl favours the first hypothesis. According to it in the early part of the 17th Century the world population stood between 400 and 500 millions. Between 1630 and 1930 it shot up to 2 billions. This marvellous rise of 1.5 billion in 300 years has been attributed to a number of causes. It is now generally felt that the accelerating tempo of increase has begun to slacken and in another 160 years or about the year 2100 will stand at the maximum of 2.6 billions. It may be observed that almost all countries are displaying, with varying differences of degree, a slowing down of population growth. There are areas where populations have not been properly enumerated. However, Pearl thinks that nearly 75% of the world population has been so enumerated as to allow of certain conclusions within the limit of a negligible percentage error.

At one time Europe displayed a lead over Asia in the matter of rate of increase. While in the half century preceding 1800 both these continents showed an increase of 30%, in the following half century Europe recorded 40% higher increase than in Asia. Since, however, the start of the notable increase in human population, the proportions of each continent have not changed much. By all means Asia leads with over half of the world population. Europe has a fifth, Africa twelfth and America and Australia about eighth of the total population (Carr-Saunders, 10). China and India between themselves own more than 40% of the total world population. While India's population is still increasing at almost an alarming rate, some authorities seem to be agreed that China's population has been stationary for the last 80 years and numbers about 450 millions.

Races of European descent have definitely been on the decrease and in about two generations or by the end of this century will cease to increase. We shall discuss the question of falling birth rate later but Gini has suggested the idea of senescence (Carr-Saunders, 10). Whether biologists and demographers agree or not with this view it is interesting to note that most European countries will show a marked fall in the next few decades. Today North America, Europe and Asia have their populations in the proportion of 2 : 7 : 14 and this disparity will widen in course of time (Coatman, 15).

Different demographers have arrived at different estimates for populations all over the world. Their estimates are based on certain assumptions and deduced logistically. A rough idea of this can be had from the following table (II) showing maximum populations that certain countries stand to record by 1980. It may be noted that these estimates were prepared before or during the World War II and as such are liable to change.

TABLE II.

Maximum number of population which some countries will record by 1980 (shown in millions).

Country	Population before the War	Estimated population in 1980
U.S.A.	131	180
England & Wales	40.6 (1925)	42.3 (E. Charles)
Scotland	4.8 (1931)	5.3 („)
Eire	2.9 (1941)	3.8 (1976, R. C. Geary)
Belgium	8.2 (1935)	8.2 (D. V. Glass)
France	41.9 (1935)	35.2 (A. Sauvy)
Germany	66.8 (1935; Includes Saar)	79.6 (Wirtschaft und Statistik; Includes Saar & Austria)
Sweden	6.2 (1935)	6.0 (C. E. Quensel)
India	276.9 (1931)	346.7 (2000; Swaroop & Lal)

Note: Figures for U.S.A. have been taken from the Report of the National Resources Committee (1938); the figures for European countries are from Eugenics Review, October '43—January '44, p. 71 et seq; the figures for India are from Swaroop and Lal (86). Names of demographers have been shown in parentheses in column 3. The figures in parentheses in columns 2 and 3 are the years for which actual numbers or estimates are available.

Swaroop and Lal have chosen the area covered by Indian Census of 1872, since they feel that the latter censuses have been coloured by the following two factors:—

1. Inclusion of large tracts of new areas at each census, and
2. The progressive increase in the accuracy of enumeration from census to census.

They calculate from the logistic that in the year 1400 there probably was a population of 8.5 millions which would reach 400 million mark in 2050 A.D. and 600 million in 2600 A.D., which is the upper asymptotic limit.

Demographic Distribution:

Between 1931 and 1941 the Indian population increased by 50 millions, a population much greater than the entire population of any European country, excluding Germany and Russia. India's total population according to 1941 census is 388,997,955. At the rate of increase of the last decade the Indian population is 430 millions by now. It is distributed over a total area of 1,581,410 sq. miles in 2,703 towns and 685,892 villages. Bombay Province has an area of 76,443 sq. miles with a population of 20,849,840, spread over 185 towns and 21,472 villages. Of all the Parsis living in India as many as 88,169 live in the province of Bombay including States, i.e. 76%. Out of these

59,813 live in Bombay City proper i.e. more than 70%. Taking the population as a whole 52% of the total Parsis live in Bombay City alone. The Parsis in India form an important minority community as admitted by even the Sapru Committee and as such their population arithmetic needs a very close study. Table III shows their rise in number since 1891.

TABLE III.

Parsis of India between 1891 and 1941 with variation percentage.

Year	1891	1901	1911	1921	1931	1941
Total	89,887	93,952	100,096	101,778	111,853	114,890
Variation percentage over last census	—	4.5	6.5	1.6	9.8	2.7

Carr-Saunders and Jones (11) speak of the Britishers as town-dwellers. Perhaps in the world there is no other community that has a greater claim to town-dwelling than the Parsi. Most of the Parsi villagers come from the villages of Thana, Surat and Broach Districts and of the Rajpipla and Baroda States. In the Baroda State there are at present as many as 5,515 Parsis living in towns and 1,415 in villages, giving a rural-urban ratio of 20:80. For the whole of India this ratio stands at 10:90. This is definitely a result of cityward current for various reasons. In 1931 Surat District recorded 10,547 against 12,516 in 1901. Surat city itself has been recording a falling number although it is on a career of expansion since 1872. In 1931 Western India States Agency recorded 871 Parsis. In 1941 there were 751. But of course the main recruitment of the Bombay Parsis is from smaller towns and villages. If we use the birth rate and the death rate that prevailed in Bombay between 1921 and 1941 and calculate the population on the last available census figures, we find that in 1941 we have an enumerated surplus population of 4,000. This figure very nearly represents the number of immigrants to Bombay in the space of 20 years. With the rise of Bombay has been associated a slow and steady denudation of the mofussil Parsi population. Table IV gives an indication of what must be happening everywhere.

TABLE IV.

Parsis of Baroda State 1901-1941 with variation percentage.

Year	1901	1911	1921	1931	1941
Total population	8409	7955	7530	7127	6930
Decrease	—	454	425	403	197
Variation percent	—	5.3	5.3	5.3	2.3

In the space of 40 years the Parsi population of Baroda has decreased by 18%. Considerable part of it is due to emigration. But it may be shown that the number of children below the age of 5 has also fallen. In 1901 there were 899 children between 0-5. 1941 Census does not give figures by sex-composition. This can be arrived at by computation. Figures for literacy have been given in State Table A, Part A, p. 100 (Census of India—VII—Baroda) which shows that the population of 5 and above consisted of 6,463 individuals. The grand total of the Parsi population in the State is 6,930. That means the child population 0-5 must be 467. In 1901 the child population 0-5 was 10.6% of the total population, whereas in 1941 it was 6.7. It may as well mean a fall in the reproductive rate. Again, in 1901, there were 1,358 persons above the age of 50. In 1941, they were just 806, a fall of 40%.

In 1901, the Census Superintendent of the Baroda State stated (p. 159) that the period 1881-1891 recorded a rise of 1.08% and between 1891-1901 there was a rise of 2.47%. However since 1901 we have seen a continuous fall upto the extent of 18%. It may be that with the fall of number of children below 5 there has been a shrinking of number of persons above 50. As regards the latter, we can conclude one of two things, that either the hand of death fell heavily upon the old or that those youths who left their land of birth for pastures new in Bombay failed to return to their birth place at the time of retiral as their fathers and grandfathers had done. The latter presumption seems more plausible than the former, because while speaking of health conditions in the State generally the Census Superintendent (Vol. XVIII Baroda, 1941, para 35, p. 22) says that "the corrected total of deaths . shows a decided improvement in health conditions."

Age Distribution:

A histogram (Fig. 2) shows comparatively the diminution in lower ages of Parsi population in 1881 and 1931 in the Bombay Presidency. The actual figures for years 1881-1931 are given in table V (p. 23). A glance at the table and histogram is sufficient to show that the number of children below 5 has been continuously falling. The percentages to total population from 1881 to 1931 are 13.6, 11.1, 9.3, 8.5, 7.6 and 8.1 respectively.* Compared with the figures for England and Wales, from 1891 to 1931 viz., 13, 12, 11, 9 and 8 respectively, the Parsi population seems to be conforming to the English standard. Excepting France the Parsis have touched low (Table VI) in comparison with other countries.

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* By mistake these figures have been shown doubled in Author's Parsis and Eugenics (1940). Opportunity is therefore sought to correct them here.

Fig. 2

Histogram showing Parsi population composition by Age-groups in 1881 and 1931

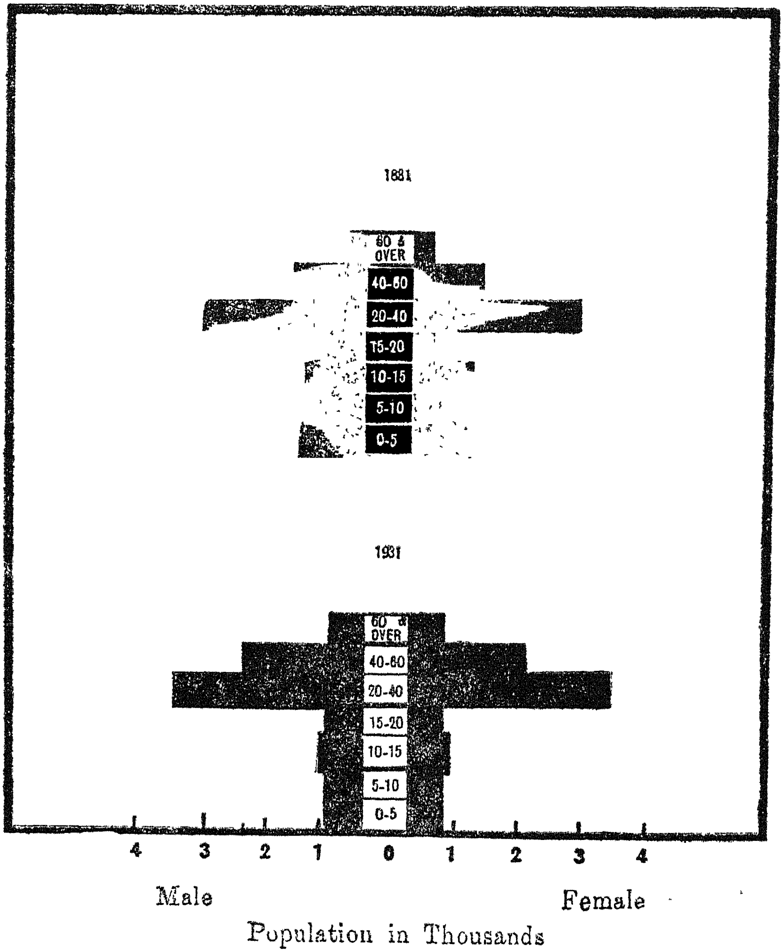

TABLE V.

Age Distribution of 10,000 of Each Sex (1881-1931).

Year	1931		1921		1911		1901		1891		1881	
Age group	M	F	M	F	M	F	M	F	M	F	M	F
0–5	789	836	755	775	853	859	900	969	1104	1118	1352	1308
5–10	911	911	919	929	970	893	1066	1121	1192	1195	1194	1177
10–15	956	938	994	942	1001	999	1184	1139	1211	1060	1291	1128
15–20	916	925	881	910	973	1009	1060	1052	1088	996	1002	977
20–40	3428	3491	3486	3604	3562	3537	3402	3283	3134	2984	3005	2985
40–60	2312	2187	2271	2113	2036	1917	1819	1790	1768	1875	1664	1773
60 & over	688	712	694	727	605	686	569	646	583	772	492	652

Note:—The figures on which calculations have been based include figures for the Western India States Agency for years 1921, 1911 and 1901. Figures of 1911 also include Aden.

TABLE VI.

Number of children under 5 per 10,000 of population shown as so much per cent in various countries including India as compared with the Parsi population.

Country ↓ Year →	1881	1891	1901	1911	1921	1931
England & Wales[1]	13.5	12.2	11.4	10.68	8.7	
England & Wales[2]	—	13	12	11	9	8
Germany	13.6	13	13	12	6.3	
Sweden	12.3	12.1	11.4	11.2	9.5	
Belgium	12.3	11.5	11.7	10.2	6.9	
France	9.2	8.7	8.6	8.8	6.1	
United States	13.7	12.2	12.1	11.5	10.9	
India	13.6	14.6	12.9	13.7	12.5	15.2
Parsis	13.6	11.1	9.3	8.5	7.6	8.1

The Parsis are almost 50% below the general replacement level in India. That they are falling in number every year and unmistakably, we shall see in our discussion of the falling birth rate. **This type of age distribution will have its effects felt sooner than later and when the female generation born in the thirties comes of age in the fifties it will show a marked decrease in births during subsequent reproductive period.**

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[1] These figures are from Census Report, Vol. VIII, Pt. 1—1931.

[2] These figures are from Carr-Saunders & Jones, Social Structure of England and Wales, 1937, p. 5. They are for group 0-4 yrs. Effects of World War I and influenza at its tail end are noticeable in 1921 for all populations.

Unfavourable age distribution with a small number of children and a growing number of old persons lays a heavy burden on the population in two ways. The children are prone to certain diseases and old persons to others. Mortality among these groups, therefore, is always higher than in the rest of the population. The hand of death falling on a child sweeps off at a stroke a potential parent and the amount spent on rearing goes to waste. When it falls on an old person, it involves as much expense on death ceremonies, etc., an economic burden from which a community cannot easily come out on account of tradition and sentiment on the one hand and lack of courage to fight both on the other.

Sex Ratio:

At no time in the history of the community since 1871, there has been an excess of females over males (Desai, 24), except locally, notably in Gujarat (Table VII). It may be due to the fact that a number of Gujarat male population leaves its place of nativity for Bombay and other cities for livelihood.

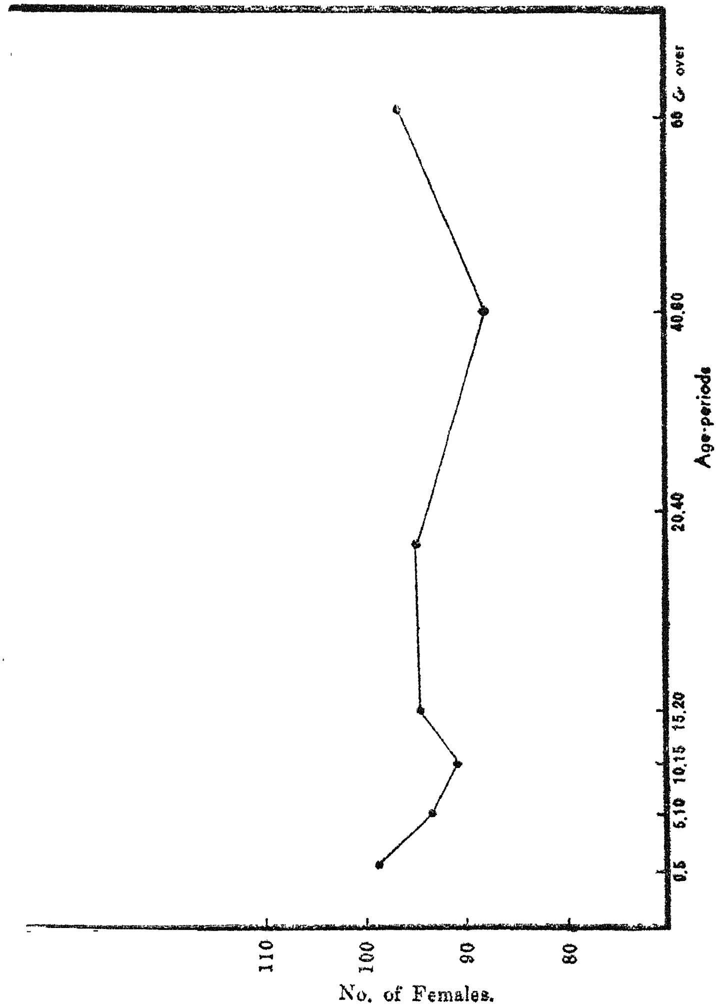
If we take All-India Parsis there were 981 females to 1,000 males in age class 0-1 and 940 for all ages in 1931. In 1941 Bombay City showed a proportion of 954, Bombay Province 984, Bombay proper including States 981, and All-Bombay 973. All-India average for 1941 was 972, thus displaying an improvement in the number of women over the last decade. Fig. 3 displays sex-ratio trend among Parsis.

TABLE VII.
Number of Females per 1,000 Males at different Age-periods and by Natural Divisions, 1931.

Age group	Bombay Presidency including States & Agency	British Districts	North West Dry area	Gujarat	Deccan	Konkan	Bombay States & Agencies
All Ages	931	932	893	1109	886	903	837
0–5	987	991	1096	1060	1021	962	859
5–10	930	928	802	1028	885	918	1052
10–15	913	910	797	999	820	908	1143
15–20	939	938	881	1074	915	915	1069
20–40	948	950	937	1254	945	906	790
40–60	881	884	828	1073	824	856	670
60 & over	961	965	972	1088	729	956	689

Fig. 3

Sex Ratio of Females to 100 Males by Age-periods in 1931 for Bombay Parsis adapted from Census of India, Vol. VIII, Pt I, Bombay, p. 128.



Birth, Death and Infant Mortality Rates of Bombay Parsis:[1]

Table VIII provides a dynamic story of the life processes of the Bombay Parsis. Although the birth rate has consistently fallen for more than the last quarter century it is the annual favourable balance of births over deaths that has been responsible, coupled with immigration, for the rise in number. The birth-rate which was fairly high in the beginning of the century showed a marked decrease in the thirties and in 1942 reached as low as 14.4. Similarly the death rate has gone down. The vital index was below par during the years 1918-21, the influenza period. Effects of the fell disease were overcome by the community in 1922 when it showed signs of revival. It reached its pre-influenza figures once in 1928 and then in 1933. Since then it has shown signs of declension and thus must be watched with anxiety for a number of years, although there has been some revival in the last 3 or 4 years.

The problem of falling birth rate is in no way peculiar to the Parsis. Almost all civilised countries have been showing the same for the last 50 years or more. So far the rule has been that higher the industrialisation the greater the fall in birth rate. With the exception of Japan, an oriental country, all the countries in the West (Table IX) have shown a fall in birth rate between 1901 and 1930 (Von Ungern-Sternberg, 90)

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[1] *Definitions*·

Birth Rate is the number of live births at the end of a given year per 1,000 of population living in the beginning of that year.

Death Rate is the number of deaths at the end of a given year per 1,000 of population living in the beginning of that year.

Infantile Mortality is the death rate of infants under 1 year of age over 1,000 live births. Vital Index of a population is the per cent ratio which Births bear to Deaths. Thus Vital Index can be expressed as

$$V.\ I. = \frac{B}{D} \times 100.$$

If true rates are used Vital Index may be statistically expressed as unity plus rate of natural increase per mean length of life multiplied by hundred.

Rate of natural increase is defined as the ratio of the difference between the number of births and deaths to the total number of deaths. Thus we can express Vital Index symbolically as

$V.\ I. = 100 \times (1 + r)\ {}^{\circ}e_{0}$ where $r = \frac{B-D}{D}$ and ${}^{\circ}e_{0}$ is the symbol of average expectation of life at birth.

In this work mostly crude rates have been used for want of sufficient material to arrive at workable hypotheses and appropriate conclusions.

TABLE VIII.

Births, Deaths and Vital Index of the Bombay Parsis, 1901-1946.

Year	Total Births	Total Deaths	Birth Rate	Death Rate	Infant Mortality	Vital Index	Maternal Mortality
1901	1140	1412	24.5	30.5	137	80.7	—
1902	1135	1405	24.5	30.4	160	80.7	—
1903	1168	1367	25.2	29.5	110	85.4	—
1904	1291	1281	27.9	27.7	—	100.7	6
1905	1333	1318	28.8	28.5	—	101.1	7
1906	1298	1491	26.5	30.5	—	87.05	8
1907	1333	1309	27.3	26.8	316	101.8	7
1908	1240	1328	25.3	27.1	286	93.3	4
1909	1272	1210	26.6	24.7	240	105.1	9
1910	1389	1391	28.4	29.3	302	99.8	2
1911	1487	1242	29.1	24.3	277	119.7	7
1912	1353	1314	26.5	25.7	289	102.9	3
1913	1313	1145	25.7	22.4	247	114.6	nil
1914	1382	1137	27.1	22.3	240	121.5	2
1915	1370	959	26.9	18.8	210	142.8	1
1916	1428	979	28.3	19.2	185	145.8	3
1917	1440	1009	28.2	19.8	204	142.7	1
1918	1396	1401	27.4	27.5	228	99.6	2
1919	1278	1518	25.9	29.8	287	84.1	1
1920	1338	1433	26.2	28.1	266	93.3	10
1921	1198	1618	22.9	30.9	294	74.04	10
1922	1263	1221	24.1	23.3	180	103.4	11
1923	1304	1259	24.8	24.0	219	103.5	9
1924	1277	1177	24.3	22.4	208	108.4	15
1925	1295	1101	24.5	20.9	202	117.6	18
1926	1186	1018	22.4	19.2	170	116.5	13
1927	1195	914	22.5	17.2	136	130.7	2
1928	1227	856	23.1	16.1	137	143.3	20
1929	1154	924	21.7	17.4	109	124.8	1
1930	1154	868	21.7	16.4	114	132.9	3
1931	1097	880	19.0	15.2	129	124.6	6
1932	1186	764	20.5	13.2	92	155.2	6
1933	1091	772	18.9	13.4	111	141.3	19
1934	1112	855	19.2	14.8	106	130.05	12
1935	1120	899	19.4	15.6	103	124.5	3
1936	1198	856	20.7	14.8	94	139.9	1
1937	1012	867	17.5	15.0	108	116.7	4
1938	1025	931	17.7	16.1	114	110.09	5
1939	965	845	16.7	14.6	97	114.2	4
1940	992	850	17.7	14.7	94	116.7	4
1941	995	842	16.6	14.0	72	118.1	5
1942	857	800	14.3	13.8	79	107.1	— Not available
1943	944	931	15.8	15.6	79	101.4	—
1944	1165	906	19.5	15.4	79	128.5	4
1945	1077	920	18.0	15.3	87	117.06	2
1946	1200	902	20.1	15.08	87	133.03	2

Note: Figures of births and deaths have been provided by the Bombay Municipality and vital index worked out from the same. The figures do not tally with author's figures in Parsis and Eugenics (Table B, p. 61, 1940), which figures were taken from the Parsi Panchayet Annual Account Book. whose source was also the Bombay Municipality. On further inquiry we are told by the Municipality that the present figures are correct.

in spite of the fact that fascist countries gave attractive awards to producers of large families providing a maximum number of cannon fodder.

Great Britain had almost the same birth rate as Parsis in the beginning of the century although the death rate of the latter was much higher. The Parsis reached the birth rate of 16.6 in 1941, which Great Britain did in 1930. In the space of 33 years i.e. a third of a century several countries have shown a percentage decline in birth rate from 15 to 62 per cent, the lowest having been recorded by Ireland and the highest by Austria (Pearl, 73). In the same period Australia showed a fall of 38% which was what the Parsis did.

TABLE IX.

Birth Rate, Death Rate and Infant Mortality Rate 1901-04 and 1930 for some Western Countries and Japan Compared with Parsis.

	1901–1904			1930		
Country	B.R.	D.R.	I.M.R.	B.R.	D.R.	I.M.R.
Germany	34.7	19.9	174	17.5	11.1	89 (1928)
England & Wales	28.4	16.2	117			
Scotland &	29.3	17.3		(G.B.) 16.6	11.6	65 (1928)
Ireland	23.1	17.7				
France	21.4	19.6	126	18.1	15.7	91 (1928)
Italy	32.6	21.9	152	26.0	13.7	120 (1927)
Japan	32.1	24.4		33	20	
				1929		
Parsis (1904)	27.9	27.7	110 (1903)	21.7	16.4	114

Indian Picture:

What is the position in India proper where we hear so much of overproduction of babies? Because of vast numbers our balance of births over deaths has remained great but is it greater or less than any other country in the world. We can compare this with only pre-World War I rates of a western country. Let us take England and Wales. Between 1910 and 1914 the survival rate of England and Wales (Table X) on an average was 10.5 per thousand of population, whereas British India's rate was 8.6. In spite of sanitation and medical science having made progress in all the great and small important countries of the world there was so much human waste in India before World War I. However, we find in the subsequent years a change for the better. While the birth rate has remained unchanged in the last 20 years or so, death rate has gone down by a third and infant mortality by a fifth (Table XI).

TABLE X.

Survival Rate of England and Wales and British India, 1910-14.

Year	England & Wales			British India		
	B.R	D.R.	S.R.	B.R.	D.R.	S.R.
1910	25	13	12	40	33	7
1911	24	14.5	9.5	39	32	7
1912	24	13	11	39	30	9
1913	24	14	10	39	29	10
1914	24	14	10	40	30	10
Average of 5 years	24.2	13.7	10.5	39.4	30.8	8.6

TABLE XI.

Birth, Death and Infantile Mortality Rates of British India (Burma omitted) on calculated inter-censal years 1920-40. (Census of India—Volume I page 36).

Year	B.R.	D.R.	I.M.R.
1920	33	31	195
1921	32	31	198
1922	32	24	175
1923	34	25	176
1924	33	28	189
1925	32	24	174
1926	33	25	189
1927	33	23	167
1928	34	24	173
1929	33	24	178
1930	33	25	178
1931	35	25	179
1932	34	22	169
1933	36	23	171
1934	34	25	187
1935	35	24	164
1936	36	23	162
1937	35	22	162
1938	34	24	167
1939	34	22	156
1940	33	22	160

These accretions in the ordinary sense should give credit to India's health services but we cannot look at this question superficially. India has at present an expectation of life at birth of 27 years for males and a little less for females. The Parsi figure stands at 52 for males.[1] More than 20 years ago Germany's figures were 55.9 and 58.8, France's 52.2 and England and Wales' 55.5 and 59.5, Scotland's 53.0 and 56.3, Norway's 55.6 and 58.7 and Sweden's 54.8 and 57.6.

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[1] I am indebted to my friend Dr. C. Chandra Sekar of All-India Institute of Hygiene and Public Health, Calcutta, for this figure.

Females all over the world have a higher expectation. In India alone it is not so. Today New Zealand possesses the highest, viz. 65.04 for males and 67.88 for females, on an average 6 points higher than America. In India those who survive are only prone to various diseases like malaria, smallpox, cholera, tuberculosis, typhoid, etc. mostly because of economic inability of the masses to feed adequately and the consequent low resistance to disease. Between 1920 and 1939 4 million Indians died of cholera alone. Although more died in the first three quarters of the period than in the last the gruesome fact remains. We can go on detailing other diseases, some endemic, some epidemic, but suffice it to say that the human waste is appalling and all that is without doubt due to lack of proper sanitary measures and public health programme in hundreds of thousands of villages, enhanced by the appalling rate of illiteracy. Against one nurse in England and Wales per 300 of population India has one in 56,000. Against one doctor to 1,000 of population in the former country we have 1 to 10,000 in India. India requires 300,000 doctors and 778,000 nurses (Hance, 40).

The question arises if a saving in human waste were to be effected what could we do with the extra mouths. This mentality is only a by-product of our superior (sic) civilisation borrowed from the West which, though quite conscious in its country of origin, forgets in India that each mouth has a pair of hands which can be used, if adroitly trained, to feed the mouth. Whether India has over-reached her maximum figure or not and whether we should so reconstruct our industrial and agricultural policy as to produce enough for all is a matter for our economists. There are various points of view. There is enough 'culturable' waste (154 million acres) according to some and there is not according to others, most of it being uncultivable (Gyan Chand, 37). Comparing the arithmetical average of population to an acre or a square mile we find that in 1931 India's density per sq. kilometer was 75 against 76 in France, 134 in Italy, 139 in Germany, 171 in Japan, 194 in Great Britain, 240 in Holland and 268 in Belgium (Lal, 54). Thus so far as land is concerned we are in no immediate danger of over-occupying it. If we have enough to feed from agricultural and industrial expansion we can still support our growing numbers. The Bombay Plan (Thakurdas *et al*, 87) aims at trebling the income of an average Indian. It is essentially an industrial expansion programme but it also aims at agricultural expansion. Although it has not been acclaimed by some of our economists, in the absence of any official programme, this is the only unofficial document of its kind.[1]

But we are digressing. We are told India and China have been increasing by leaps and bounds for decades. We can examine this in the light of what has been happening the world over. It is true that China and India between them contain more than a third of the total world population. China's population has been roughly put down at 450 millions but it is surmised that for the last 80 years or so Chinese population has been stationary, while other populations of the world have increased at the rate of more than 1 per centum per annum (Pearl, 73). Let us apply this rate to the Indian population to see how far it approximates to or equals this rate. According to the India Year Book the Indian population between 1872 and 1921 increased by 54 millions or 20 per cent, which gives the annual increase at 0.4 per centum per annum. According to Close (14) between 1911 and 1921 the rate was 0.12 per cent and between 1901 and 1911 0.62 per cent. However between 1921 and 1931 it showed a rate of over 1.0 per cent. According to the present census we have added 50 millions to the population which works out at 1.4 per centum per annum. Satya Swaroop[2] has worked out future population growth by ingenius manipulations, whereby in 1951 the saving of infants for the year will amount to six to seven millions and in 1961 to eleven to thirteen millions. Indeed these are staggering figures and will shake the foundation of the world from turret to base, but it can be said that India came in line with other countries some 10-20 years ago in the matter of rate of increase, and it is not necessary to assume that any population forecast is bound to turn out true, for there is so much of uncertain element in the population dynamics. However, we cannot afford to be self-complacent and planning must be intentional and purposeful. In India of the future, if technological advances capture the imagination of the masses it will automatically help raise the standard of living and with improvement in literacy we can possibly lower the birth rate so as to leave breathing time for our planners. It may however be stated that India does not form part of that world which comes under the category of rapidly growing countries. Her increase is not phenomenal but just what the tendency of the world seems to be like. Pearl (73) in his revision of world population data brought uptodate in 1937 gives 25 most rapidly growing populations embracing almost all continents. India significantly is not there. The lowest rate given is 1.53 for Unfederated Malaya States and the highest 5.81 for Palestine, the average being 2.5 mean annual growth rate per cent. Pearl says that in some of these countries the increase is partly due to immigration, 'but for the most part the rates represent true national increase.'

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[1] The National Planning Committee appointed by the Indian National Congress had made some headway in this direction but its labours stopped with the leaders going to jail. After their release in 1945, an absence of 3 years, a revival was set afoot. The Committee's original plans will undergo drastic changes on account of expansion during the war and the advent of national government.

[2] Census of India, 1941, Vol. I, p. 41 et seq.

Parsi births, deaths and infant mortality stand no comparison with the rest of India as can be seen from the figures given above. Their decline has been continuous for a number of years and the author (24) had tried to give a cursory analysis of the same in an earlier work. Unfortunately the census material of the present decade does not throw any light on the question. We have therefore to depend on scanty material at hand and construct our hypotheses thereon.

SHOULD BIRTH RATE FALL AND WHY.

Responsible Factors:

We may look for the causes of fall in birth rate in the reproductive trend of the community, which is a very delicate mechanism liable to imbalance with the slightest disturbance. The phenomenon of falling birth rate is not dependent on one but many factors. They may be one or more operating at one and the same time or at different times in their logical sequence, or there may be a *causa causans* which again may be dependent on several other causes. The factors operating may be either biological or sociological or both; or there may be economic or psychological factors operating or assisting the above factors. Unfavourable age distribution, fall in marriage frequency and fecundity, reorientation of sex relationship, education and advancement of women, their emancipation from various disabilities, literacy and change of mental outlook, advent of relative prosperity and the anxiety to keep up the acquired position in life by limitation of births, desire to afford better education to a smaller number of children than just educating a large number of them, extreme urbanisation, etc., are some of the factors which may in their turn or assisted by one another tend to create a fall in birth rate. This phenomenon or rather this group of phenomena is always present in a growing population and reacts in much the same way in all the countries.

Marriage & Divorce:

We have noted (Table VIII) that for the last quarter century and more the Parsis have recorded a continuous fall in birth rate, which tendency has so far not been found in any of the communities of eastern countries. India perhaps continues to grow at a stationary birth rate of 33. We have also seen that the number of the young aged 0.5 per 10,000 of the Parsi population has progressively fallen since 1881 (Table V). Is this due to failure of a sufficient number to marry and at the right time? Let us examine this in the light of available data. Since 1865 all marriages and divorces are being recorded in the Registry. Table XII shows the number of total marriages and remarriages between 1901 and 1942. The checkered career is noticeable. While between 1901 and 1941 the City Parsis rose by 40%, their marriage number has gone up by only 22%. It is difficult to say why but there must be subtle inner forces at work.

TABLE XII.

No. of Marriages and Remarriages amongst Parsis from 1901-1946.

Year	Marriages	Remarriages
1901	379	22
1902	441	19
1903	395	19
1904	384	20
1905	423	23
1906	380	22
1907	407	57
1908	477	23
1909	329	13
1910	449	25
1911	418	15
1912	467	—
1913	441	—
1914	459	19
1915	465	9
1916	504	11
1917	486	15
1918	475	11
1919	505	15
1920	566	15
1921	429	11
1922	520	14
1923	410	15
1924	434	24
1925	448	9
1926	402	8
1927	409	10
1928	365	4
1929	416	7
1930	382	11
1931	375	5
1932	397	15
1933	354	4
1934	337	5
1935	403	13
1936	376	6
1937	475	10
1938	422	10

Year	Marriages	Remarriages
1939	476	9
1940	463	9
1941	463	6
1942	476	22
1943	630	19
1944	518	13
1945	558	10
1946	562	6

N.B.—Column 2 includes marriages as well as remarriages.

In column 3 from 1914-1920, 1931-1934 and in 1941 and 1942 remarriages are of widows only while in other years remarriages are of widows as well as widowers.

Divorces also tell their own tale (Table XIII). Between 1901 and 1936 the total divorces in a year did not once exceed one digit. In 1937 the number shot up. The amended law in 1936 brought down the desertion period from 7 to 3 years. This did the trick. 1943 seems to be the worst. The table throws one very interesting sidelight. Between 1901 and 1936, 49 husbands and 71 wives applied for divorce. Between 1937 and 1943 39 husbands and 94 wives applied for divorce. Preponderance of women from 1½ times to 2½ times of the husbands strikes our attention. While nearly half of husbands' applications were rejected before 1936, women's rejections were just one-fifth. Evidently women were the most aggrieved parties. Even in the subsequent period relatively more male applications have been rejected than female. All we can say at this stage is that low rate of marriage and high rate of divorce must be reflected in lesser number of children from year to year.

Modal Age at Marriage:

From decade to decade the age at which the mode in marriage occurred, that is, the age at which the largest number got married in either sex, has continuously shifted. Seventy years ago infant marriage was not unknown amongst the Parsis. It began to be scarce since 1882. And since this occurred as late as 60 years ago we cannot say that the ill-effects of the immature marriages resulting in weak, unhealthy devitalised children and loss of womanhood at an early age have persisted. Indeed the lowest marriage age of the female in 1932 was 15 and of the male 20, mode occurring at age-group 21-25 for females and 26-30 for males (Desai, 24). Table XIV shows an unmistakable sign of prolonging of marriage age in both the sexes. How long this is to continue one cannot predict. A man is recorded to have become a father at 94. Thus man's age does not count as far as reproduction is concerned, unless it be considered from the point of view of earning capacity during the rearing period. Our concern, however, lies with the female age. After all a woman's reproductive capacity is limited to a definite span, a little after menarche and a little before menopause. The further she goes away from the former the lesser are the chances of reproduction. The mean age at marriage for men in England is 29.0 and for women 26.4. The commonest age at marriage for spinsters is between 21 and 25, and for bachelors between 25 and 30. This is almost in concord with the figures for Bombay City Parsis. The 1931 census has by sampling recorded a very interesting result. Out of 713 sample slips examined, 1 woman was found married between age 0-12, 231 between 13-14, 245 between 15-19, 219 between 20-30 and 17 between 30 and over. It would appear that Bombay City Parsis are going one way and mofussil Parsis another.

Mean Age:

If every year a smaller number of children are being born it means there is an accretion of older people at the top. From decade to decade the mean age of the Parsis has moved in the upper direction. It was 29.4 in 1901 and 30.6 in 1931 for the whole community. Indian population shows a distinct decrease in the same period, males decreasing from 24.7 to 23.2 and females from 25.1 to 22.8 (Table XV).

TABLE XV.

Mean age of the Parsi Community in four decades pari passu with the Indian population.

Year	Total Parsis	Parsi Population		Indian Population	
		Male	Female	Male	Female
1901	29.4	—	—	24.7	25.1
1911	28.7	28.8	28.6	24.7	24.7
1921	30.1	30.2	29.95	24.8	24.7
1931	30.6	30.7	30.5	23.2	22.8

Parsis are definitely aging. England and Wales reached the mean age 30.6 in 1921 and Northern Ireland 23.02 in 1926. But about England and Wales it may be said that the large rise was due to extermination of the young on account of the World War I.

The movement of mean age for Parsis in the upward direction is of one significant interest. At age 24 the expectation of life in India is under 25 years. If that applies to the Parsis then the delaying of marriage raises the question* of rearing a family and reduces the period to a shorter span. This is bound to result in lowered birth rate. There is however one silver lining to this from the actuarial point of view. Of the total Indians who insure their lives Parsis have a mortality rate of 0.66 over the Hindu rate taken as unity, followed by Europeans 0.75, Anglo-Indians 0.79 and Muslims 0.92. In 1943 the general mortality rate of India was 22.9 against the Parsi rate of 15.6. It may be the Parsis are the longer-lived community of India but the woman's advancing age puts a bar to reproduction and this is what needs scrutiny.

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* Which it does not, vide p. 32.

Effect of Age Composition on Birth Rate:

In our brief discussion of age distribution we have stated that it is bound to have its effects felt sooner than later. Sundbarg, a Swedish statistician, some 50 years ago suggested a measure which, if applied to a community's age composition, can show whether it is increasing or decreasing. It is very simple in construction and application. The community is divided into three age-groups, 0-15, 16-50 and 51 and over. The middle section, namely, 16-50 must almost always be 50%. Now if the smaller age-group, 0-15, is larger than the older age-group, 51 and over, the community is increasing: if vice versa, it is decreasing: if the percentage is equal, it is stationary. This applies admirably well to a community of stay-at-homes. But on account of increased communications and facility of movement, man has become more mobile than he was 50 years ago. As a result of this almost every day there are some people always moving into a group of community and others moving out of it. The cumulative effect of this movement in a year is appreciable. In a decade it is still more appreciable and in a generation it can change the complexion. The above three Sundbargian categories are respectively progressive, regressive and stationary. Since then Whipple has suggested two more, viz., secessive, if by emigration a community loses its population and, accessive, if by immigration it gains. According to the 1931 census (Vol. I, Part I, India p. 87) the Parsi population divided on the basis of 0-15, 15-50 and 50 and over was 27.2, 56.7 and 16.1 per 100 of population. To all intents and purposes it may be considered a slowly progressive population but we cannot say how far it is affected by the migratory movement and the two extremes are too near each other. The census dubs it stationary and we do not know if it applies to the whole province of Bombay or a part of it, like the Bombay City. If the City, it is subject to immigration; if mofussil, emigration; if the province itself, it contains by far the largest number of Parsis and the population is least subject to either tendency. For the three opening decades 1911, 1921 and 1931 age composition of the Parsi population was as follows (Table XVI):—

TABLE XVI.

Age Composition per 100 of Parsi Population, 1911, 1921 and 1931.

Year	Age–Group		
	0–15	16–50	51 & over
1911	28.2	57.6	14.15
1921	25.8	57	17.2
1931	26.75	54.75	18.5

From our point of view the two extreme groups are important. The smaller age-group has shown unmistakable signs of becoming diminutive, whereas the older age-group is expanding. The big drop shown in 1921 most probably due to influenza has been levelled off in 1931 and this result is much nearer the all-India Parsi percentage of 27.2 quoted above. If the trend shows anything it is that we are slowly approaching the stationary group and will some day begin to be regressive. Anyway we appear to be on the accessive-stationary axis. Unfortunately 1941 records are not available and we cannot justify our assumption. However by way of contrast we can show Indian figures. The three age-groups in India in 1931 showed a percentage distribution of 39.9, 50.5 and 9.6, a totally progressive population.*

The attention of the reader is invited to Appendix A attached to this chapter, and the logistic curve (Fig. 1) on the frontispiece both kindly done by Mr. M. A. Telang, Assistant Statistician to Government of Bombay, Finance Department (Supply) at the author's request. The logistic would show that by 1961 the population will have reached its maximum and that thereafter it will remain comparatively steady unless the Parsis take special measures in time to check this tendency.

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* See N. B. on page 43.

Von Ungern-Sternberg (90) aptly calls the three-age classes as child-quota, parent-quota and grandparent-quota. In tracing the effects of age composition on birth rate he concludes that the increase in grandparent-quota entails two things, 1. the burden of maintaining them on the parent-quota and 2. a competition in the economic sphere with the younger members, again the parent-quota. These two handicaps deter the latter from procreating or even marrying and hence the fall in birth rate. Again we may go further and say that of the grandparent-quota nearly half (females) are physiologically debarred from reproduction and the remaining half (males) do not physiologically function to the full. This depresses the birth rate. Thus a changing, shifting composition of the community is bound to result in a diminishing birth rate.

N.B.—The five classification standards suggested by Sundbarg and Whipple have roughly the following composition:—

Age class

Classification	0–15	16–50	51 and over
Progressive	40	50	10
Regressive	20	50	30
Stationary	33	50	17
Secessive	40	40	20
Accessive	25	60	15

The above will enable the reader to understand the question very much better. It is highly improbable that the Government will publish 1941 census details. They have already begun to prepare for the 1951 census and they might incorporate these details. We shall then have a better opportunity of comparison.

Married, Unmarried and Widowed Population:

Table XVII gives us a sorry tale. In 50 years the unmarried population has gone up by 40%, while the married population has decreased by nearly 35%. The only solitary feature for satisfaction is the dwindling of the widowed population by about 5%. Fig. 4 portrays the situation graphically. It would be worth while finding the reasons why a large number of Parsis do not marry. Dr. Frederick Osborn, while reviewing the author's earlier work **Parsis and Eugenics** (24), wrote as under:—

TABLE XVII.

Ratio of Unmarried Persons per 1000 of Populatoin in British Districts.

Age-Group 15-45 per 1000 of Population.

Year	Unmarried	Married	Widowed
1881	161	759	80
1891	322	628	50
1901	444	501	55
1911	480	474	46
1921	472	488	40
1931	559	414	27

> "Mr. Desai's figure of 50% unmarried in the upper classes seems incredible judging from our standards, but something like that is true in Ireland and it may well be true in India. If his census and other material are reliable enough to make this figure about correct, **it is an exceedingly important finding.**"

The figures are from Census of India 1931, Bombay Presidency, Vol. VIII, Part I, p. 102. The truth, however unpalatable, is there and the Parsis must look for the reasons why.

APPENDIX A.

LOGISTIC CURVE FOR PARSIS.

By M. Telang.

The "logistic curve" is fitted to the data of population of Parsis in India, (vide Fig. 1). The equation of the logistic is derived by assuming that the rate of increase of population gradually decreases as population increases. The logistic can be written as

$$P_t = \frac{L}{1 + e^{\frac{B - t}{A}}}$$

where B and A are constants of integration, P_t is the population at time t, and L is the limiting population.

In this case for calculating the logistic the three census years of 1921, 1931 and 1941 were used; writing the three equations for these years

$$\frac{1}{P_0} = \frac{1}{L} \left(1 + e^{B/A} \right) = .0009825$$

$$\frac{1}{P_1} = \frac{1}{L} \left(1 + e^{\frac{B-1}{A}} \right) = .0008940$$

$$\frac{1}{P} = \frac{1}{L} \left(1 + e^{\frac{B-2}{A}} \right) = .0008704$$

and solving these we get as the equation of the logistic

$$P_t = \frac{1160.3785}{1 + e^{\frac{-1.4885 - t}{.7574}}}$$

For T=3 i.e. for 1951 the population works out to 1,15,729 and for T=4 i.e. for 1961 the population works out to 1,15,955. The limiting population is 1,16,037.

The logistic is not a very good fit; and this may, in the main, be due to the figures given for 1931 which seem to be highly suspect. Thus, the rate of increase of population which was generally about 5% till 1901 is 6.5% during the ten-year period 1901-1911, has reduced to 1.6% during 1911-1921, but has suddenly risen up to 10% during 1921-1931. This makes it apparent that either the 1931 figure is wrong or the census figures for 1921 were not correctly computed being probably underestimated and hence there is a sudden jump in the 1931 figures. It may be noted, however, that the community as a whole did display a tendency to show an increased rate of growth in population during 1921-31.

One thing however seems to be apparent from this curve fitting. It shows that the population of the Parsis in India will reach its maximum about 1961 and that thereafter it will remain comparatively steady unless some special measures are undertaken to curb the downward trend in its rate of growth.

CHAPTER III.

FERTILITY ON THE DECLINE.

Definition of Fertility:

Fertility and fecundity are two interchangeable terms meaning almost the same thing in ordinary parlance. But when we reduce them to the finer values of biology each assumes a different meaning, which we do not in the ordinary way attach to them. Some define fertility as **ability** to produce children, while fecundity is measured by the actual number of children born (Popenoe and Johnson, 78). Pearl (73) puts it the other way about. He defines fecundity to mean 'the innate potential reproductive capacity of the individual organism, as denoted by its ability to form and separate from the body mature germ cells.' He defines fertility to mean 'the total actual reproductive capacity of pairs of organisms, male and female, as expressed by their ability when mated together to produce (i.e. bring to birth) individual offspring.' Population Association of America has adopted almost similar definitions (Fairchild, 29). According to it, fecundity is 'physiological capacity to participate in reproduction,' and fertility is 'fecundity expressed in performance and therefore measurable.' Thus when we speak of actual births we speak of a community's fertility and not fecundity, which is in actual sense immeasurable. In this book fertility will mean to conform to this definition.

Fertility in a Given Population:

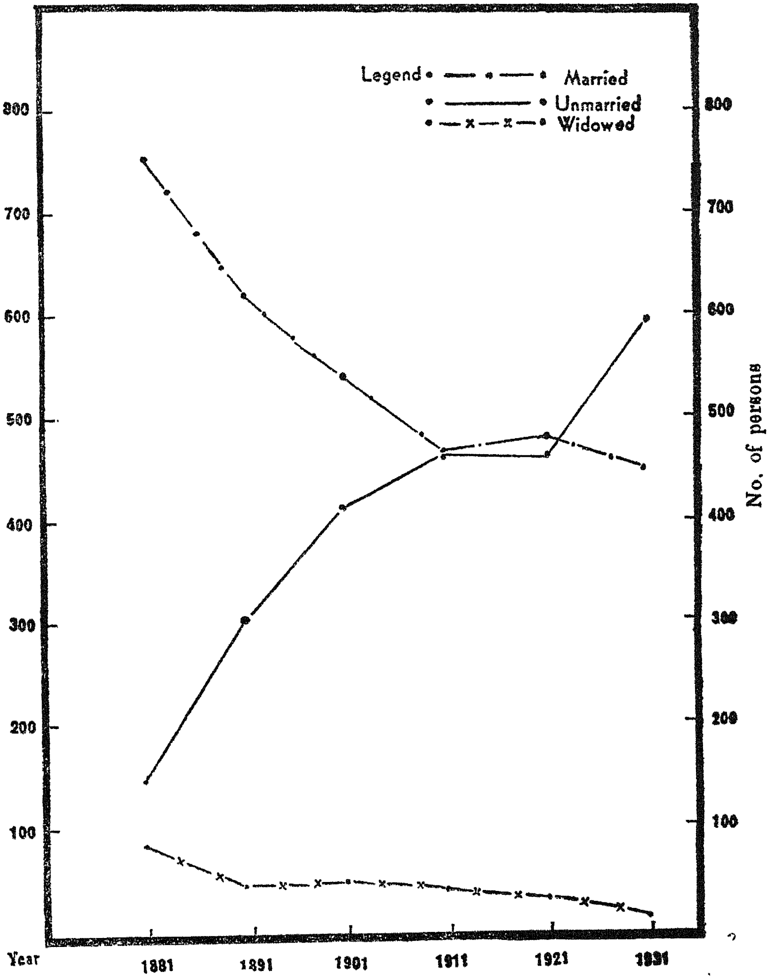
There are various methods of judging whether a community is increasing or decreasing or is stationary. In a very simple way fertility can be compared by using ratios of children to women, such as, children under 5 years per 1,000 women aged 15-44 or 20-44 years or per 1,000 married women aged 15-44 years. Lorimer and Osborn (58) are of the opinion that such a ratio measures effective fertility since it falls midway between gross fertility and net fertility. Gross reproduction rate and net reproduction rate, if arrived at, can usually give us a complete picture of the fertility of a community. To arrive at the former rate we require, by the method devised by Kuczynski, the annual fertility rates for women in each year of age in a given population. For want of such and other data we have resorted to devious methods in this chapter to arrive at some workable hypothesis.

Parsi Fertility:

Let us revert to Table V, Chapter II. We find that in 1891 there were 3,980 females between the ages of 15-40. We may take it that these women were largely responsible for 969 females between ages 0-5 in 1901. Referring to Fig. 4 we find that general marriage rate in 1891 was roughly 650 per 1,000 of population aged 15-44 years. Therefore, we may expect 2,587 to be married women in our above sample. In the absence of knowledge of age-specific death rates, i.e. rates at which deaths occurred under all age classes, if we use a general mortality rate of 30 per 1,000 allowing of plague mortalities, etc., we may eliminate about 750 women. This would give us 1,837 married women who may be considered responsible for reproducing 969 females aged 0-5 in 1901. That is, 100 mothers produced between them 52.7 daughters, which is not even a replacement ratio. Roughly speaking every alternate woman showed fertility. Again in 1921 in the age class 15-40 there were 4,514 women, with 836 females 0-5 in 1931. If we apply marriage rate of 450 per 1,000 we expect 2,025 to be married. Out of these, general mortality rate of 15 per 1,000 would carry away 300 women, leaving 1,725 married women responsible for 836 females 0-5 in 1931. This gives us a ratio of 48.5 per 100 women. Evidently fertility is falling, however defective our method of calculation may be. Census Report for Bombay Presidency (Vol. VIII, Part I — 1931) gives an illuminating table on pp. 105-6, showing a proportion of children under 14 to those aged 14-43. According to this table, proportion of children of both sexes per 100 married women aged 14-43 was 185. Taking 940 females per

Fig. 4

Married, Unmarried and Widowed Parsi Population, 1881-1981



1,000 males we may expect a ratio of 95 to 90 in the children of 0-14 age class in 1931. Referring to Table V we find that in age class 0-15 there were 2,685 females in 1931 out of which 836 are in the age class 0-5. This means there were only 24 females 0-5 per 100 married women in 1931, much below our computation.

How Population should be Replaced:

Let us see how a population should replace itself and whether the Parsis conform to that way of replacement. Let us take two instances — one in which case the mothers do not replace themselves and the other in which case they just replace themselves. Let us start with 1,000 mothers with two children each, i.e. 2,000 children. Say, of these, 950 are daughters (American ratio, Popenoe and Johnson, 78). Say, 10% die before maturity, i.e. 885 remain, of whom only 70% marry, i.e. 618.5 prepare themselves for the next generation. But only 80% will bear children, i.e. 494.4 will be effective mothers. Thus less than 50% will procreate. Now if we start with 4 children, applying the same method of calculation as above, we will have 957 mothers taking part in reproducing the next generation. In 1931 Census 713 sample slips showed 3,252 children born alive giving an average of 4.6 per family. Out of these only 2299 survived giving an average of 3.2 per Parsi family. If half of these were daughters then we may take it that every mother was more than reproducing herself. According to Dublin 3.1 children per family are necessary for maintaining population at a replacement level (Charles, 12). He computes that out of every 1,000 women 788 will marry (American ratio). They must reproduce the 1,000 females for the next generation, or 1,000 married women must reproduce 1,268 daughters and on the same basis 1,000 men must reproduce 1,350 sons to maintain population at a replacement level. This gives 2,618 children to 1,000 families or 2.6 children per family. But as all families do not reproduce and according to Dublin one marriage in every six is either sterile or does not bear children for one reason or another, the extra burden is thrown on the rest of the married couples which brings the ratio to 3.1 children per family. If the same circumstances apply to the Parsis then they may be considered to be at the replacement level but that is not so. Their marriage ratio in 1931 was 450 to 1,000 of population. If we use the same ratio of non-reproductivity as the American, viz., 5 to 1, we will have only 375 women left to reproduce the original 1,000 women, i.e. less than half of 788 American married women. In other words, 1,000 married women should reproduce 2,666 daughters. On the ratio of 940 Parsi females to 1,000 males, we must have 3,039 sons. Adding up, we have 5,896 children to every 1,000 families, i.e. 5.896 per family. We are short of this expectation by more than 60%. Obviously the Parsis are on the decrease, unless the marriage rate goes up again and not only marriage rate but also reproduction rate.

Fertility Amongst the Poor:

So much for the generality of the Parsis. We do not have sufficient data for the rich and middle classes but we have some for those poor who are on relief by the Parsi Panchayet. In an inquiry undertaken a decade ago Bulsara (7) found that a poor family had an average of 4.55 live-births. How many lived to maturity is not stated. The census (1931) reported a similar figure. In 1943 the writer (24) took a few completed families of Bombay and mofussil poor Parsis where wife's age was 45 and over. Wherever known the second wife was avoided. The following result (Table XVIII) was arrived at:—

TABLE XVIII.

Fertility in Completed Families of the Bombay and Mofussil Parsi poor where wife's age is 45 and over, 1938-1942.

	Bombay	Mofussil
No. of families .	145	66
No. of children ever born	682	317
No. of children surviving ..	488	
No. of dead children below age 1 .	80	
No. of still-born . ..	3	
No. of miscarriages . ..	21	
Children ever born per family	4.7	4.8
Children surviving per family	3.3	
Infant Mortality per %o ..	117	
Wasteful reproductive effort .	15%	

We agree the samples are too small but the handicap is somewhat offset by the fact that the families are completed families. We do not have complete details of mofussil families as we have of the Bombay families. If Bombay families have a ratio of 4.7 children ever born to a family they are in the neighbourhood of 1931 all-India ratio. It is impossible to believe that in 1931 all classes of Parsis bred at the same level. If we assume that better classes had a lower level and there is nothing wrong in assuming so since that is the trend all over the world, it would appear that before 1931 lower economic grades of Parsis bred at a higher level than 4.7. There have been cases of 15 and 21 children recorded in the past (Desai, 24) with a terrible reproductive waste and child mortality. All-Bombay average infant mortality rate for Parsis between 1938-42 was 97. Therefore, the rate of 117 for the poor is rather high and we can assume that the poor children are more swiftly carried away by death than their more fortunate brothers and sisters. When we look at the number of children surviving we feel something passing over the spine. Since 3.3 children per family is near replacement level it would appear that the Bombay poor are following a small family pattern. Perhaps with the saving of babies this might improve a little. Another sample of 685 families with children applying for help to the Panchayet between 1938-42 provides interesting data (Table XIX). It may be noted that the class of people asking for help now is strikingly different from those asking for it 20, 30 or 40 years ago. It contains those who at one time ranked in a grade above the destitute poor.

TABLE XIX.

Fertility amongst 685 Families applying for help between 1938-42.

No. of families	685
Children ever born	2550
Children surviving	1915
Dead children below age 1	222
Still-born	39
Miscarriages	137
Children ever born per family	3.7
Children surviving per family	2.8
Infant mortality per ‰	87
Reproductive waste	16%

If then this is the pattern followed by the class immediately above the poor we would leave the reader to judge the pattern that may be prevailing amongst the socially and economically better classes. Even if we assume that there are a number of young couples in the above 685 families our results will not be much vitiated.

What Causes Decline:

The foregoing discussion would tend to show that fertility amongst the Parsis is on the decline. What causes decline is a knotty question. Is it health, is it education, is it economic condition, is it social position, is it occupation, or is it environment that is responsible for this decline? It may be that one or more or all of these forces may be responsible for the decline but it is difficult to prove it on account of paucity of data in our hands.

In 1943 the writer attempted to study the fertility trend of the Parsis by approaching two maternity hospitals patronised by the Parsis. A schedule (see Appendix B) drawn up on the lines of Pearl (73) and Davis (21, also see Lorimer and Osborn, 58, p. 256) was sent, but the doctors were reluctant to oblige. All that one can say at this stage is that an opportunity to study a very vital subject was withheld.

Contraception:

Artificial interference is likely to disturb insemination to a certain degree. Whether it does wholly or partially will depend on its effectiveness. It is safe to assume from experience that amongst educated Parsis contraception is not unknown. When this technique came to be known and how far it is widespread it is not possible to gauge. Through welfare organisations this technique is gaining ground amongst the poor as well. Fewer children have been born amongst the Fort poor in the space of the last five years than they were five years previously. The reason is not far to seek. High cost of living on account of the war was the immediate telling factor inducing contraception or abstinence.

It is difficult to correlate general fall in fertility with contraception. Continued use of appliances may lead to inflammation in the cervix and endometrium but there has not been sufficient evidence to prove that this is the direct cause of sterility or sub-fertility amongst human beings. Doctors may help us in this respect with Parsi data. Perhaps the mode set by the present cost of living will continue well for a long time to come and the birth-rate will show further depression in the next decade and more. France of Louis XV had a birth-rate 40 per thousand. In 1932 that is after 150 years it fell to 17.3. There were 4.5 children per marriage in the time of the former; in 1932 it was 2.3. Landry (56) suggests that this is mostly due to voluntary limitation of births. In 1944 the Parsis recorded a birth-rate of 19.5 against 15.8 in 1943. This is strongly suggestive of immigration of young couples.

Between 1921 and 1940 there were 8,850 marriages including remarriages (Table XII). If in the course of these 20 years an average death rate of 19 per 1,000 prevailed we estimate 3,360 deaths amongst married women leaving 5,490. Assuming 17% to remain childless (Pearl, 73, p. 165; Lorimer and Osborn, 58, p. 257 on the strength of Davis' data) we have roughly 4,567 women left. Of these, let us assume, two out of every five take part in reproduction every year. In 1941, therefore, we should have roughly 1,800 women to give birth to 1,048 babies including 53 still-births. That would be surely absurd. If we do not count the still-babies, really speaking only one-fifth of married women took part in reproduction. According to Pearl only 10% of the total 'physiologically potentially capable' women in U.S.A. in 1930 took part in reproduction. In 1941 Bombay City recorded 29,215 total Parsi women of all ages. If age composition was the same or about the same as in 1930 (see Table V) we would have 12,806 'physiologically potentially capable' women between the ages of 15 and 40 in 1941. If only 450 are married per 1,000 (see Fig. 3) we have 5,762 married women. If 17% i.e., 979 remain childless we have 4,783 women left for reproduction which is very much near our figure of 4,567. There were only 1,048 births including still-births in 1941 and assuming that there were no twin births we may say that 1,048 women, i.e. about 8% of 'physiologically potentially capable' women or 20% of married women took part in reproduction. Putting it the other way we might say that one married woman in every five bears a baby every year or there is a spacing of 5 years between each delivery. If this spacing could be reduced by one-fifth we would almost double the number of births. All this is hypothetical, however, and it needs to be proved with actual data on the subject.

Lorimer and Osborn (58) in summarising Davis' data of 2,200 American married women found the effect of contraception to result in 'less than 50% of total reduction in fertility' below the 4-child level. Pearl found contraception prevalent amongst 42.7% whites and believes it to be a 'factor at least potentially capable of influencing the birth-rate.' There is no doubt about Parsis resorting to contraception but it is difficult to satisfactorily explain the spacing of 5 years between two children, unless other factors such as involuntary sterility and limited fecundity are considered. Here the author must frankly confess his inability to deal with the question without medical help. According to Meaker (1929, cited by Lorimer and Osborn, 58) 'one-third of all demonstrable causal factors in sterility are on the male side, and two-thirds on the female side.' The factors that lead to sterility may be inherent in man, most important being the failure to manufacture sufficient number of sperms (spermatogenesis), the mode being considered at 100 million per cubic centimeter. There may be even endocrinal malfunctions mostly found in women and there may be other complex physiological factors as suggested by several writers like Gini, Fisher and others in their hypotheses. Sexual vigour by social occupation has been demonstrably shown by Pearl to be responsible for reduced fertility. There may even be psychological factors, and differences in age at marriage may also count. Gonorrhoic infections lead to sterility. Lorimer and Osborn refer to dyspareunia (painful intercourse) as one of the causes of childlessness as reported by Dickinson but then they suggest that dyspareunia and childlessness may only be symptoms of physiological disturbances. There is no known cure for

absolute sterility which is only to be found in 30% of all sterile matings but other 70% can find a partial solution in a few prophylactic and commonsense measures like 'hygiene, avoidance of specific infections, early marriage, and consultation with specialists in this field if pregnancy does not occur in the early years of married life.'

The question of Parsi health in Bombay is considered in Chapter IV but how far it affects fertility is difficult to gauge statistically. Education plays an important part in indirect reduction of fertility. We have no direct data to prove that education is a sterilising factor but we can trace rising literacy amongst the Parsis and conclude its effects on fertility on the world analogy. Indian Census differentiates between those who can read and write in their mother tongue and in the English language. In 1931 males aged 5 and over and 20 and over were 791 and 851 respectively per 1,000 of population, females recording 734 and 780 for the two age groups. From the stage of scribbling their names and keeping dhobies' accounts (Karaka, 50) women have come up on the rung of educational ladder with marvellous rapidity and are now holding high positions in many a profession. The movement for female education is just 100 years old. It started in 1849, nearly quarter of a century after the establishment of educational facilities for boys. The movement gathered momentum as it grew from year to year, when ultimately today we find Parsi girls in all sorts of college courses. The Bombay University was founded in 1857 and more than a thousand matriculates passed out by 1884. There were B.A.'s and M.A.'s too. Some took their LL.B.'s and still others joined covenanted civil service by open competition in England. When Engineering and Medical Colleges were opened Parsis joined them in good numbers. Some even took to agriculture by joining the Madras Agricultural College. There were vakils, solicitors, barristers, pleaders, doctors, engineers and so on. In almost all professions open to them the Parsis rushed. Table XX shows the trend of education since 1901. Since the beginning of the century more have offered themselves for higher studies. Today Parsis claim the highest percentage of population, viz. 20 per mille, in the

TABLE XXI.*

Progress of different religions in literacy (Bombay Presidency)—(1901-1931).

No. per mille who are literate.

Religion.	1901	1911		1921		1931	
	Persons	Males	Females	Males	Females	Males	Females
Hindu and Animistic ..	59	114	5	138	19	165	23
Muslim	41	60	11	88	12	121	16
Jain	269	514	28	543	123	494	96
Zoroastrian..	650	750	541	787	674	842	727
Christian	294	371	204	424	252	444	277
(i) Indian Christian ..	Details not available			306	169	172	97
(ii) Others				928	849	916	824

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* Census of India, 1931, Vol. VIII, Pt. 1, p. 298.

1913			1914			1915			1916			1917			1918		
I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
–	16	40	–	11	40	–	11	39	1	12	30	–	10	43	1	11	47
–	6	1	–	3	2	–	6	12	–	3	6	–	1	5	–	–	3
												–	3	–	–	3	3
–	1	–	–	–	4	–	1	1	1	1	2	4	7	1	1	1	5
									–	–	–	1	–	–	–	–	–
–	–	–	One			–	–	–	Two			Two			Five		
–	7	–	–	10	–	–	9	–	–	4	–	1	10	–	1	4	–
–	14	–	–	14	–	–	10	–	–	8	–	–	15	–	–	4	–
–	22	11	2	32	5	1	8	12	1	17	3	–	14	2	–	12	2
Three			One			–	–	–	–	–	–	–	–	–	–	–	–
—			One			Two			–	–	–	–	–	–	Two		
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

TABLE XXI*—(Continued).

Progress of literacy in English since 1901 by Religion—(British Districts only).

No. per mille who are literate in English.

Religion	1901		1911		1921		1931	
	Males	Females	Males	Females	Males	Females	Males	Females
All Religions	13	2	17	3	23	4	27	6
Hindu	9	–	13	–	19	1	23	1
Muslim	5	–	5	–	18	1	12	–
Jain	20	–	33	1	54	3	67	3
Zoroastrian..	407	100	507	175	539	247	602	340
Christian								
(i) Indian Christian	277	138	142	62	154	78	172	97
(ii) Others	–	–	886	779	916	829	916	824

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* Census of India, 1931, Vol. VIII, Pt. I, p. 304.

University. Amongst Indian communities Parsis rank the highest so far as education is concerned. Table XXI bears this out amply. While considering the effect of late marriages on fertility we shall again refer to the factor of education. Suffice it to say that the greater the state of education the lesser the desire to procreate. 2,119 women graduating between 1816 and 1913 from the Boyn Mawr College had reproduced only 263 girls to take their place in the next generation. This amounts to a very small replacement but it shows where education leads. The Parsis own the highest university education percentage in the world. About 50% of women graduates and 75% of men graduates in America marry. Number of children per family as recorded by various writers shows a falling tendency. Cattell's study of the men of science shows that 261 completed families showed an average number of 1.88 children per family (Rumney, 82). A study of Parsi graduates in the last 50 years or since the start of the Bombay University 90 years ago would perhaps show a similar result.

DIFFERENTIALS CREATED BY SOCIAL AND ECONOMIC ENVIRONS:

Urbanisation:

The Parsis are today more than 90% urbanised. It is but a symptom of the disease. A hundred years ago urbanisation was merely a concomitant of the pioneering spirit. It had a definite purpose behind. Today the drift is unconscious, unmotivated, undirected. As a result of the cityward current, the village population is getting depleted; more than 50% of the houses are remaining locked; agricultural occupation is being slowly deserted, while there are no new accretions to the line; there are fewer avenues of employment; economic condition, though not very bad, has nothing in common with the rising standard of living elsewhere; there is indebtedness although exact figures are not obtainable; although medical facilities are not so bad, educational facilities have lagged very much behind with little provision for secondary or high school education. These are the factors that are responsible for the currents and cross-currents that seethe and surge in the active drama of life, till they throw out the bubbling, foaming, fragile matter that cannot stand the strain of floating up and down in the convective, liqueous state of a decadent society. The result is, as we have stated above, an unconscious move to a place where they can find a relatively more stable society. Whether they do so or not is a different matter and their egress out of the new society becomes more difficult as new patterns of life become discernible. They hang on to hope by the thinnest thread, some rise above and some sink below the level.

Thus in city we begin to perceive for the first time a percolatory system which is largely absent in a village society and which is responsible for segregating certain sections of society from the rest. Like tend to go with the like and the less adaptable, less intelligent gravitate to a lower substratum. We begin to distinguish between the rich and the poor, between the upper and middle class and the lower middle class, between the intelligent and the unintelligent, between the socially high and the socially low, and many other distinctions which ingenuity of man can devise and construe.

Social Stratification in Bombay:

Parsis have been known as a very affluent community in the past, and Mlle. Menant (65), a French traveller in the closing years of the last century, paid a well-deserved compliment as under:—

> "A un moment, sur les 9,584 mendiants de la ville de Bombay, on ne trouvait que 5 Parsis et une Parsie. Quant aux malheureuses victimes due vice et de la debauche, un Parsi n'a pas craint d'affirmer que pas une seule de ses coreligionnaires ne peu etre accusee de vivre du salaire de l'infamie."

Only six Parsi beggars, 5 men, 1 woman and none accused of infamy! Not a bad record. But today the life is different. The rich are getting richer and the poor are getting poorer. There is a middle class which has two tiers, upper and lower. Bombay city in 1941 had a population of 60,000 Parsis. If every five Parsis form a family there are roughly 12,000 families. 40% of these families have at one time or other been in want and have been obliged to ask for charity. If the middle class form a bulk larger than any put together, they should be more than 50%. The rich therefore are less than 10% and there may be degrees of richness.

Rise of Small Family Patterns:

While poverty has increased in the community since the beginning of this century, the middle class have conformed to small family patterns. This has in no way been less accelerated by the rise of small-flat housing in Bombay. We cannot say definitely whether the former is the result of the latter or vice versa but in the last 20 years and more, a large number of small-flat houses have come into existence. This necessitates raising of small families. In Poland such a tendency has been noticed amongst medical practitioners, where housing conditions take precedence over all other material considerations in limiting births (Kacprzak, 48). It may be stated that amongst the Parsis of Bombay one- and two-child patterns are fairly noticeable and the virus has infected even the lower middle classes. Some of the families now taking help from the Parsi Panchayat were at one time lower middle class families. A study of 117 such completed families reveals an interesting tale (Table XXII). These families had 134 sons and 153 daughters, in all 287 children, an average of 2.45 per family. While we consider each family with its child-content

TABLE XXII.

(a) **Size of Completed Families where wife's age is 45 and over.**

No. of Families.	Children				Total	Average
	Sons		Daughters			
	Above 18	Below 18	Above 18	Below 18		
117	66	68	72	81	287	2.45

(b) **Families by Child group.**

1-chd.	2-chd.	3-chd.	4-chd.	5-chd.	6-chd.	7-chd.	8-chd.	9-chd.	10-chd.
37	36	12	12	9	6	2	1	1	1

= 117

we find an alarming situation. It can be said that 1-child and 2-child patterns have come to stay with the lower middle class too. 37 families reporting 1-child content and 36 2-child content is what was least expected of them.

183 fresh applications for help were received by the Panchayet between 1901 and 1910. They had 560 children giving an average of 3.06 per family. Of these applicants the largest number was of widows. Most of them had lost their husbands during their reproductive span. Had these husbands lived up to the end of the reproductive span, that is up to age 45 of their wives, they would have left more progeny. If we assume that every quinquennial group could have left at least one child during each completion of quinquennial period we can find from Table XXIII that the 111 widows between 17 and 45 would have left 225 children more, which would have brought the average per family to 4.3.

TABLE XXIII.

Possible number of extra children 111 widows (1901-1910) could have contributed had their husbands lived to their wives' reproductive span.

Age group in which wives lost respective husbands	Number of widows in each age group	Number of quinquennia before age 45 can be reached	Number of possible children Col. 2 x 3
1	2	3	4
15–20	4	5	20
21–25	13	4	52
26–30	25	3	75
31–35	28	2	56
36–40	22	1	22
41–45	19	0	0 Total 225

It is perhaps safer to conclude that the above portrays the presence of better class Parsis of yesterday amongst the recipients of relief rather than that it portrays small family patterns amongst the poorer sections. We have elsewhere arrived at 2.8 children to a family (Table XIX) but the typically poor class still has large families. The 57 families on relief residing in Gamadia and Captain colonies of the Parsi Panchayet have 200 children which gives an average of 3.5 to a family and some of these families are still young.

Early Marriage:

Average marriage-age of a group plays an appreciable part in group differential. Pearl (73) considers this as of primary importance amongst indirect variables. According to him this factor and the large number of interests of the better classes are powerful factors in lowering expression of fertility. The earlier the age at marriage the greater is the chance of leaving numerous progeny and more generations within a given period. On the whole the race that marries young as a rule has a larger number of generations alive at the same time. This was first simply and convincingly expressed by Galton (32). Two persons of the same age, one marrying at age 22 and the other delaying and marrying 11 years later, can in course of time create a great diversity. In one century the descendants of the former would outnumber those of the latter by 2½ times, in two centuries by 6 times and in three centuries by 15 times. In Chapter II we have discussed the general movement of marriage-age in the upward direction. The poor girls who apply for help for marriage to the Parsi Panchayet have their average marriage age varying between 18 and 23 (Desai, 24) depending on the class from which they come. Fertility has been known to vary inversely as the economic status. The higher the economic status the lower the fertility, and the lower the economic status the higher the fertility. This is the situation which prevails all over the world. It is to some extent true of the Bombay Parsis too. The old multiparae mother is however now being displaced in Bombay. Increasing desire to escape from marital responsibility so as not to hamper political, economic and social ambitions in life amongst intellectual classes and a growing phenomenon of childlessness amongst socially superior classes are a definite menace to the community. Whereas the economically low classes come to the high level of their earnings very early in life and marry, the economically better classes do not know where to draw a line, their aspirations, standard of living and a desire to rear their family in comfort being the primary factors delaying marriage. Dublin says that if a man is not married at 30, his chances of surviving five years longer and marrying in the interval are 1:2. For a woman they are 1:4 (Popenoe and Johnson, 78). Although husband's age at marriage plays a considerable part in affecting fertility, the effect is not so much as in the case of the wife's age at marriage (Lorimer and Osborn, 58). There is a negative correlation of fecundity with wife's age and the longer she goes without marriage the lesser the fecundity. Pearl (73) has reached very interesting results in this respect. He says that increasing age at marriage among advanced economic classes with a definite purpose to limit births by means of effective checks and appliances forms a major factor in observed class differential. If the same did not operate, he believes there would be but little fertility differential.

The present type of education imparted to women preparing them as it does for a career is very often a sterilising factor. Many years of education and then setting up in a career take away much of their reproductive span. They long for good, associable husbands but at their advanced age they become scarce and when one is found he is perhaps already married. As the age reaches 30 this search becomes a weary factor and at 35 the effort has to be given up in a number of cases. That is the result of our education. While it raises one's economic and intellectual level, it does not stop to demand a heavy toll.

Karachi Parsis:

Unfortunately the Indian Census of 1941 does not show the influence of the marriage-age of the mother. The Karachi census has however given a sample which is worth considering here (Tables XXIV and XXV). In 1941 Sind had a Parsi population of 3,838 (1,936 males, 1,902 females), out of which 3,721 (1,876 males, 1,845 females) lived in Karachi alone. There were three Parsis in the Khairpur State.

TABLE XXIV.

Size of Family and Present Age of Parsi Married Women of Karachi. (Sample Population, City Area, 1941).

Age	No. of married women	No. of children born	Average	No. of children surviving
28	1	2	–	2
29	–	–	–	–
30	1	1	–	1
35	1	4	–	4
38	2	8	4	7
40	1	3	–	3
42	1	4	–	3
45	3	17	5.3	9
46–50	1	4	–	4
51–55	1	1	–	–
56–60	1	1	–	–

TABLE XXV.

Size of Family by Age of Mother at First Child (Sample Population, Karachi City, 1941).

Age at Birth of First Child	No. of Married Women	Total No. of Children Born	Average	Total No. of Children surviving
20	1	3	–	3
21	2	13	6.5	6
22	1	2	–	2
23	1	4	–	3
24	3	12	4	11
25	1	4	–	4
26–30	2	5	2.5	4
31–35	1	1	–	1
36–40	–	–	–	–
41–45	1	1	–	–

The sample records 13 married women of whom not one is below the age of 28. Of course in the population there must be some but the sample does not record them. If their frequency of occurrence is less they are likely to be missed in the sample, and conversely if they are not recorded by the sample, we may say, provided the slips are thoroughly mixed up to afford even chance to every age group, that their frequency is less. These mothers of different ages have given births to 45 children, which records a rate of 2.6, almost what we seem to find in Bombay. We may not much depend on the sample but it is significant to note that nearly half of the families are completed families and at the end of their reproductive period. Table XXV shows that there is a tendency for women to marry more between 20 and 25 than in any other age group, again a tendency recorded by Bombay. In a study of mothers of 4% most intelligent and 4% least intelligent children Roberts (81) found the marriage age to be 27.4 and 23.9 respectively. He thinks many marry late for economic reasons but he believes some do so for 'inborn psychological reasons.'

Growing childlessness amongst some families in higher classes in Bombay has been noticeable for some time. That is a eugenic loss to the community. We shall refer to this later when we discuss the eugenical import of a declining population. Suffice it to say that with the rising crescendo of education and standard of life as a concomitant of economic affluence the diminution of leadership potential is accentuating from generation to generation.

Motivation for Child-bearing:

None would dare say that there is more libido or sexual desire in one stratum of society and less in another, or more in one group of individuals than in another. It may vary in degree from individual to individual. There may be docile and lusty men, there may be frigid and nymphomanic women, with large numbers congregating round the normal, in all strata. It may however be that a group living a primitive life may show less inhibition than the one living a civilised life. Lujo Brentano, a German thinker on the subject, believed that **sexual indulgence amongst the culturally low classes recompensed them for their foregoing of other competitive enjoyments** not open to them. Ungern-Sternberg (90) suggests that **however much the poor may indulge in this the law of Gossen, almost on the lines of the economic Law of Diminishing Returns, prevails, putting a stop to one's desire for further satiety when its continuance would deprive him of another more urgent need, which he may otherwise have to forego.** As we can see procreation is just by the way and comes as a natural consequence when sexual satisfaction is indulged in. The rhythmic desire may be as much present in a rural population as in an urban society and ovulation may occur exactly in the same manner in both types of women as in a chimpanzee without any physiological defect in fecundity, but it may be that one group whose needs are fewer than the other may not mind the arrival of a number of children, while the latter may weigh its 'other pleasures' against 'future babies' and find the balance tilting in favour of the former. Mere sexual instinct is not sufficient motivation for child-bearing and it needs to be replaced or augmented by a strong parental instinct (Johnson, 47). There may be various other motivative or inhibitive factors such as equal sexual representation, compassionate children, fear of loss of a child by death, pride in and satisfaction for existing children, psychological factors, family pride, love for husband, economic advantage, religious fervour, etc. on the side of motivation and state of low health and income, inharmonious relations between parents, fear of childbirth, restrictions on life, rationalisation, etc. on the side of inhibition. We cannot say how far these factors are prevalent in the community and a proper study on the lines of Johnson (47) and Dennison (22) is called for.

'Arrivism':

Capitalism, rising standard of life, literacy, freedom of thought, speech and action, assimilation of western morals. ethics and mores, and development of new norms and patterns have been responsible for fall in Parsi fertility. Society, as it is today, is a potent factor in making one more covetous and restive. Biological continuity takes a second place, material wealth and enjoyment taking a precedence. Ungern-Sternberg calls this 'arrivism.' Pearl thinks that thrift is essentially a biological sequence of instinctive racial security. A plant may store its food in its bulb or a squirrel may lay by its store of nuts and man may put his money in a bank. Thus, according to Pearl, capitalism has its roots in biology.

Religion:

We do not think religion plays as great a part amongst Parsis as in other countries where Roman Catholic religion is a predominant factor. Zoroastrianism deprecates celibacy and extols not only married life but also numerous progeny.* This dictum has however not the same hold on Parsi mentality as the Catholic religion has on its masses. No religion teaches sexual indulgence (not overindulgence) to be a physiological sin, not even the Jesuit who himself keeping away from the 'flesh' does not ask his catholic 'flock' to desist from continuing its race. We can definitely say that the average Parsi is not guided by religion in the matter of reproduction.

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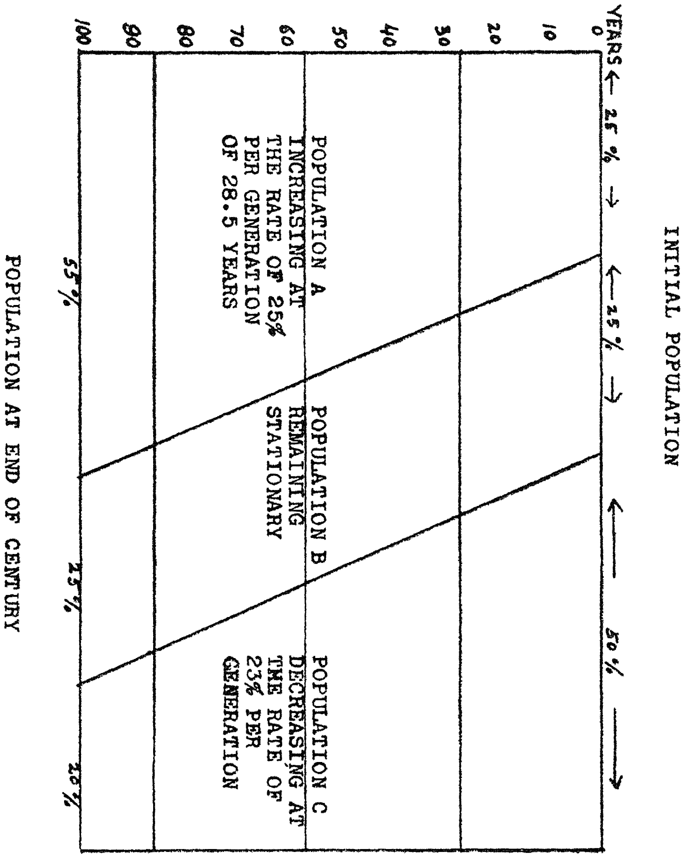
* Vendidad IV, 47.

How small Patterns affect a Community:

With a few exceptions, say amongst millionaires and some well-secured professions, the tendency to have small families is widespread amongst the best and the ablest families. This is enough to change the whole life of a community in one century. We have already referred to Galton's example. Lorimer and Osborn (58) sound a more alarming note. A rapidly increasing group in three generations may become 16 times more numerous than the one that is equally rapidly decreasing, assuming that both had equal proportions in the beginning. As a matter of rule one-fourth of the present population reproduces half of the next generation, another one-fourth reproduces nothing and the rest, that is half, just reproduces itself (Popenoe and Johnson, 78). Thus the future mental and physical endowment of a community should depend on what it reproduces itself from. The eugenical import of a differential fertility is clearly discernible from Figures 5 and 6. In Fig. 5 we start with a 100% initial population divided into three hypothetical sections each having 25%, 25% and 50% composition. Population A increases at the rate of 25% per generation of 28.5 years. Population B remains stationary and Population C decreases at the rate of 23% per generation. In one century the three groups will have attained a composition of 55%, 25% and 20% against the original 25%, 25% and 50%. If the increase is of the abler kind, the community gains; if the opposite, it loses. Fig 6 portrays the same situation in a somewhat different way. Time scale of each generation is made up of 30 years and 5 generations between 1945 and 2,095 are shown in the graph. We have the population divided again into three hypothetical groups of 60%, 30% and 10%. The first group has a 1-child

Fig. 5.

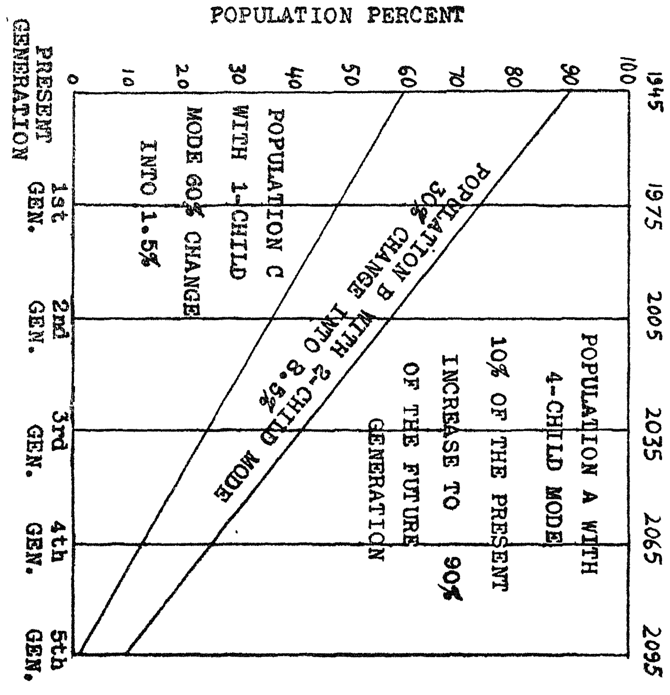
DISTRIBUTION OF A POPULATION WITH A FIXED DISTRIBUTIVE TENDENCY IN ONE CENTURY.



ADAPTED FROM LORIMER & OSBORN.

Fig. 6.

EFFECT OF DIFFERENTIAL BIRTH RATES IN THE LONG RUN.



DIAGRAMMATIC - AFTER LAUGHLIN

mode, the second a 2-child mode and the third a 4-child mode. At the end of the 5th generation, i.e., in 150 years, the original 60% group will be only 1.5% of the total population, 30% will be 8.5% and 10% will be 90%. The Parsis must study these informative graphs if they are at all anxious about their political and social future. We do not know when the Parsis took to 1-child and 2-child modes. It may be one generation old or even less but that must be checked in proper quarters if we care for qualitative population.

If the present wheel of fortune continues to turn in a manner that is detrimental to the maintenance of abler classes, we shall continue to witness a slow accretion of the lower classes in the lowest stratum, a diminution of the medium classes at a steady pace and a quick throwing out of the rich and higher middle classes, who fail to leave any issue behind to continue the line. Parsi society today is revolving rapidly. The tangential, centripetal and centrifugal forces, released as it were in the process of revolution, are today encompassing the whole social structure. The childless rich are thrown out, the middle class is sagging and the poor are gravitating lower and lower. **In its biological career the Parsi community has arrived at a cross-road.** Let it pause and think which way it is going to take.

It is an undoubted fact that in the community social promotion has played the part of a sterilising factor. The like marry the like and leave to their progeny a common heritage of good characters and infertility. Man is a relatively infertile animal and as time progresses infertile or sub-fertile strains get stabilised. This is what is called the Fisher effect (Roberts, 81). Human fecundity range is constant as against the variable range in other animals but 'man never exerts his reproductive capacity to the full' (Huxley, 44). **That differential reproduction in a small community involving a homicide of the best talent must eventually end in a disaster is a truism which needs to be taken cognisance of by the Parsi community.**

Roberts (81) deplores the present British population trend and adduces three valid reasons for doing so, viz.,

1. That the British have a contribution to make and cannot regard with equanimity a decline in numbers in relation to their neighbours;
2. That a sharply declining population involves a disastrous change in age-composition;
3. **That the decline in numbers is bound to be linked up with a decline in quality also.**

These reasons sum up the whole fundamental biological problem in a nutshell and bring us face to face with the problem of 'relative fertility and survival rate of differentiated groups and classes composing the population of a nation' (Pitt-Rivers, 76). All the groups in a population do not reproduce themselves equally and if a quantitative change involves a qualitative change as well, it is of the essence to know from which group the population mainly reproduces itself. **If the Parsis have to make themselves felt socially and politically amongst other sister communities, as they did in the past, they must see that their main reproduction comes from amongst their able groups.**

There is however a biological side to this question. Today we know so little of the biology of human reproduction and whether fertility has merely a genetic basis or also environmental is a moot point. Haldane (39) thinks there may be something wrong with the premises that differential birth rate causes national degeneracy. On the analogy that France, Belgium, Italy and even Germany have not succeeded in raising rate of reproduction in spite of subsidies it is argued as to how far any measures designed to improve the birth rate will bring in desired results. Haldane however concedes that if late marriage and contraception are the right cause, then it is entirely in the hands of a community to set the matters right by devising ways and means on sound economic and psychological grounds. We shall refer to this subject again when we suggest some possible measures of raising birth rate.

CHAPTER IV.

HOUSING AND HEALTH.

We have seen that the Parsis are largely town-dwellers, 52% of the total population living in Bombay City alone. In this chapter we shall deal mostly with the housing and health conditions of the Bombay City Parsis only, largely the poor Parsis. For a small community it is quite important to know how it lives and dies. What happens in Bombay is in no wise an exact replica of what happens outside it or in the country, but in some measure it acts as an indicator.

1. Housing.

Definition of a House:

The Census has a species called the 'Census' House, the Municipality has a different species of the same genus called the 'building' or 'tenement' under one undivided roof. The definition followed by the Census of 1911 calls it "the building or part of a building occupied by one family, that is by a number of persons living together and eating together in one common mess, with their dependents and resident servants." Thus the idea of a commensal family first came to be applied to the census operation. In municipal areas the house was to 'be taken to be the unit separately assessed to house tax.' A bungalow with separate servants' quarters was to count as one house and each separate block or row of servants' quarters as another. Census report makes a drab reading and unless one takes an intelligent view of the massive data before him he will soon ramble into realm of fancy and ultimate boredom. If it is read carefully no census is without a spotlight of humour, sometimes dry, sometimes grim and very often times characteristic of the "unpaid' civic volunteer-enumerator on whom the voluminous census report has to depend. Thus in 1911 the above instructions were carried out by each enumerator as he understood them best. Some took city survey number as the house. A spacious bungalow with outhouses always puzzled the enumerator, who cut the matter short by counting each room of servants' quarters as a 'house' in itself. The 'chowkidar,' sleeping at the temple gate, was made a 'house' in himself and his family although living in the same locality divided into twain. Sedgwick in his 1921 report (Bombay Presidency Vol. VIII, Part I) calls the Census House 'a hopeless hybrid between the family and the building.' We may go further and say, 'has the qualities of neither.' While in mofussil even the apology of a house, a hut, a hovel or a 'pish' mat shelter of a Baloch herdsman, takes on the superb name of a 'census House,' in Bombay City a tenement assumes that garb. The English Census has a very appropriate name for a 'house.' It is a 'structurally separate dwelling' and is defined as 'any room or set of rooms, intended or used for habitation, having separate access either to the street or to a common landing or staircase' (Carr-Saunders and Jones, 11). This is what the Indian Census calls a 'building under one undivided roof.' It is to be viewed with the background of a 'private family,' which means 'any person or group of persons . as being in separate occupation of any premises or part of premises . . . lodgers being so treated only when returned as boarding separately and not otherwise.' Using this as a yardstick England and Wales had 1.10 family per dwelling in 1921, which was reduced to 1.09 in 1931 (Rhodes, 79). We shall presently discuss this.

Density:

According to the Census of 1941 Bombay City had an area of 30 sq. miles with 46,171 occupied houses and a density of roughly 50,000 persons to a sq. mile, or a little less than 80 persons to an acre. According to the 1941 Administration Report of the Municipal Commissioner, Bombay had an area of 26.189 sq. miles with a density of 89 persons to an acre. It was in the twenties and thirties that the Bombay Municipality entered on its career of expansion and better Bombay. The number of houses in the Bombay Municipal area in the first year of each decade were 34,792 (1901), 38,687 (1911), 37,958 (1921), 36,824 (1931) and 39,817 (1941). In the space of 40 years when the population of the city doubled the number of houses increased by less than 15%. The former residential sites have been rebuilt and occupied as business premises. Naturally the number of persons to a house must therefore increase. In 1901 there were 25,760 persons to 1,000 houses. For the first year of each subsequent decade we have 25,820, 33,020, 35,270 and 32,269.

In Bombay there is at all times a class of population which lives under the blue canopy. Such a population is reasonably estimated at between one and two lakhs.* This includes waifs, serfs, wastrels, low-paid employees, factory hands and ne'er-do-wells.

England and Wales has an area of a little more than 58,000 sq. miles. It is therefore 3/4ths of the Bombay Province excluding States or 3/7ths including States. In 1931 95% of private families lived in dwelling houses, while 5% lived in hotels, boarding and lodging houses, barracks, workhouses, schools, hospitals, prisons, etc. **None was recorded as living in streets.** No more comment is necessary.

In Bombay City in 1931 81% of the tenements were one-roomed, housing nearly 800,000 persons, nearly 3/4ths of the then population. It works out at an average of 4 persons to a room, there being 197,516 tenements; 256,379 persons were found to live 6 to 9 persons to a room, 80,133 persons 10 to 19 to a room and 15,490 persons 20 or more to a room (Khandvala, 51). Thus in 1931 86% of the Bombay population was overcrowded and 96% had no privacy of a room. Since then little has been done to relieve congestion.

Parsis have been known to live in congested localities. In 1906 their largest concentration was Fort North (Table XXVI). Fort slums — at least a part of them because still there are some — began to be cleared after 1921 when the fashionable Sir Phirozeshah Mehta Road was projected and the Queen's Road joined with the Ballard Estate. As the new buildings were mostly built for business purposes the locus of population moved further north and today there is largest single concentration of Parsis round about Grant Road.

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* Mr. M. V. Modak, the City Engineer of the Bombay Municipality, while presiding at a lecture on 5th November, 1944, estimated this number at two lacs. With the refugee problem the figure has gone well over a million.

TABLE XXVI.

Concentration of Parsis in several wards of Bombay City in 1906 (ignoring concentration below 2,000 in any single locality).

Locality	Ward	No. of Parsis	Density of total population per acre	
			(in 1906)	(in 1921)
Fort North ..	A	10790	214	194
Market ..	C	2159	396	411
Dhobi Talao ..	C	8641	367	356
Khetwadi ..	D	6402	197	255
Mahaluxmi ..	D	3322	38	57
Tardeo ..	E	2835	123	213

Housing in Great Britain:

In 1931 England and Wales had the smallest number of private families (Table XXVII) living in one-room tenements, more than 70% of the families occupying 4 to 6 rooms or more (Carr-Saunders and Jones, 11). The average works out at more than a room to a person. In the same year in Scotland

TABLE XXVII.

Distribution of Families and Persons according to Rooms occupied, England and Wales, 1931.

No. of rooms occupied by each family	Families		Population		Average No. of Rooms per person
	No. (000's omitted)	% age	No. (000's omitted)	% age	
1	348	3.4	673	1.8	0.52
2	1016	9.9	2974	7.8	0.68
3	1545	15.1	5433	14.3	0.85
4	2520	24.7	9592	25.2	1.05
5	2423	23.7	9629	25.3	1.26
6 or more	2381	23.2	9741	25.6	..
All Rooms	10233	100	38042	100	1.21

4.08 persons lived to a house. 9.5% of the houses were 1-room tenements and 37% 2-roomed. 35% of the private families lived more than 2 to a room, 15% 3 to a room and 6% 4 to a room, average on the whole being 1.27 persons to a room. Carr-Saunders and Jones state that it is 'customary to assume that houses which contained more than two persons to a room, understanding by a room a living room or bedroom, were likely to be overcrowded. According to this standard, 6.9% of the private family part of the population of England and Wales was living under overcrowded conditions in 1931 as compared with 9.6% in 1921.'

We can allow of certain latitude to a highly industrialised country like Great Britain but Bombay figures stand no comparison and the neglect is too obvious to call for comment. The same is true of many cities of India. Lt.-Col. Dabholker (18), Director of Public Health, Bombay Presidency, in his presidential address before the Housing and Health Section of the 2nd All-India Population and 1st Family Hygiene Conference (1938), deplored the lack of legislation to control housing in India and referred to the various Acts passed by Britain against our solitary, derelict Act of 1915. Between 1920 and 1928 City Corporation of Birmingham built 17,682 houses. Between 1935 and 1938 there was an annual average of 4 to 5 thousand houses. Sheffield built in the same period 200 houses a year. In later years, i.e. between 1934 and 1937 as many as 1,25,000 houses were built. This is a colossal figure. Still the British Government thought there was a shortage in England and Wales. During the first World War London built only 30 buildings but between 1921 and 1931 there was feverish activity. The census of May 1931 discovered a serious shortage and between that date and March 1936 1,321,000 additional houses were built. The Registrar-General computed that by 1941 there would be a population of 41 millions requiring an additional number of 1,700,000 houses. Carr-Saunders and Jones believed in 1937 that if in the meantime standard of living rose, hundreds of thousands of new houses would be necessary in 1941. However, the World War II broke out in 1939 and six years of damage and devastation have made the situation very acute.

TABLE XXVIII.

Parsi Colonies in Bombay.

No.	Name of Colony	Owned by	No. of Bldgs.	No. of Tenements	Average per House.
1	Khareghat ..	Trustees of the Parsi Panchayet..	26	190	7.3
2	Gamadia ..	,,	17	207	12.2
3	Captain ..	,,	7	106	15
4	Dadar ..	,,	27	207	7.6
5	Jer Bag ..	N. N. Wadia Trust..	5	136	27.2
6	Rustom Bag ..	,,	17	168	9.9
7	Nowroz Bag ..	,,	13	358	27.5
8	Cusrow Bag ..	,,	12	424	35.3
9	Malcolm Bag (Jogeshwari) ..	N. M. Wadia Trust..	7	28	4
10	Parsi Colony at Dadar ..	Individually owned bldgs. by Trusts and individuals ..	200 (app.)	1500	7.5
11	Marzban Colonies at Tardeo and Jacob Circle ..	Rehthan Fund ..	34	260	7.6
12	Chikalwady Colony.	Zoroastrian Bldg. Fund ..	26	246	9.4
13	Tata-Readymoney Colony ..	Sir Ratan Tata Trustees and Sir Cowasji Jehangir Trustees ..	11	220	20
14	Shapur Bag .	Sir Shapurji Broacha Trust ..	9	145	16
15	Mahaluximiwalla Charity Bldgs, ..	R. D. Mahaluxmiwalla Trust ..	4	48	12
16	Malegamwalla Charity Bldgs. (Mahim) .	Malegamwalla Trust.	2	44	22
17	Tata Blocks (Bandra) ..	Bai Hirabai Tata Memorial Trust.	9	36	4
	Total ..		426	4323	

Parsi Colonies:

The Parsi community may safely be called a pioneer in the matter of slum clearance and better housing in Bombay. It was in the beginning of this century that the first colony was built with a view to provide healthy housing to the poor and lower middle class Parsis. Since then every decade has seen the rise of a colony or two, each vying with the last in its design, layout, get-up and amenities. These colonies and special housing schemes (Table XXVIII) provide accommodation for from a poor widow on a monthly rental of 8 annas to a middle class family on a rent of Rs. 140. There are 426 houses with 4,323 tenements accommodating as many families or roughly 20,000 persons in healthy localities. More than half of these buildings are for the poor. The middle class who pay a high rent disproportionate to their income are very badly in need of good housing schemes but for want of knowledge or volition on the part of donors such buildings are scarce. Even for the poor the attempt is in no way sufficient.

From a study of 2,841 families on the General Register of the Parsi Panchayet it was found that (Table XXIX) 695 families lived in charity-owned houses and 2,146 in private-owned houses. The latter class of families pay rent to the extent of Rs. 37,854 which works out at roughly Rs. 16 per family per month, which is nearly 50% more than the former. It would appear that while one-third number of families have been provided with cheap rent housing, two-thirds are badly in need of the same. **Roughly speaking therefore the community has been able to meet housing demand to the extent of 33% only.**

Table XXX shows the rent paid by these families. The families on relief by the Panchayet are more numerous than the rest. Their largest number, 461, pays rent upto Rs. 15 per mensem. This number is 3½ times more than the number paying rent above Rs. 15 per mensem. The situation is somewhat different in so far as non-relief cases are concerned. There is almost an equal number paying rent below and above Rs. 15 per mensem. We take Rs. 15 as our basis because that would in the ordinary sense be reasonable charity rent in relation to the average income of a family.

TABLE XXIX.

Families living in Charity-owned and Private-owned Houses.

	No. of families	No. of persons	Average per family	Total rent paid Rs.	Rent per family Rs.	Rent per person Rs.
Charity-owned ..	695	3035	4.3	7334	10.5	2.4
Private-owned—(Not on Relief by the Panchayet)	1732	7128	4.1	32273	18.6	4.5
Private-owned—(On Relief by the Panchayet) ..	414	1485	3.5	5581	13.5	3.75

TABLE XXX.

Rent paid by Families.

Rent.	No. of families not on relief by the Punchayet	No. of persons in families of Col. 2	No. of families on relief by the Panchayet	No. of persons in families of Col. 4
Below Re. 1 ..	37	26	102	59
From Rs. 1–5 ..	117	75	254	169
,, ,, 6–10 ..	487	192	1710	666
,, ,, 11–15 ..	463	178	1561	741
,, ,, 16–20 ..	416	73	1773	349
,, ,, 21–30 ..	385	50	1913	285
,, ,, 31–40 ..	134	7	850	45
,, ,, 41 & over.	83	530	3	24

Tables XXXI and XXXII are self-explanatory. A large number of families live in one to three rooms to a tenement and the largest number is below the second floor. The kitchen has been included as a room. Thus 582 families live in one room only where they cook, bathe and carry out all other privacies — almost a shocking state of affairs. It may be stated without hesitation and exaggeration that more houses to house poor and middle class families are still a necessity.

TABLE XXXI.

Families arranged by rooms per tenement.

No. of Rooms	No. of families not on relief by the Punchayet	No. of families on relief by the Punchayet
1 Room	425	157
2 Rooms	554	166
3 Rooms	520	126
4 Rooms	127	10
more than 4 rooms ..	39	2

TABLE XXXII.

Families arranged according to floors occupied.

Floor	No. of Families not on relief by the Punchayet	No. of families on relief by the Punchayet
0	419	147
1	444	152
2	290	98
3	192	35
4	47	12
4 and over	19	4

2. HEALTH.

In 1931 while the Hindus and Muslims had less than 400 persons above the age of 60 per 10,000 of population, Jains less than 500 and Christians less than 300, the Parsis had a population of 700 in the Bombay Presidency. This is characteristic of an aging population.

Deaths:

Table XXXIII shows Parsi deaths by age groups (Bombay City) between 1927 and 1946. We observe that between 0 and 20 there is a tendency to diminish and the diminution varies up to 50%. We find a somewhat different tale between 20 and 40. Here the number has oscillated within a very small amplitude. Men and women seem to be dying at a fairly constant rate, men perhaps more out of lowered vitality for one reason or another and women due to maternity and other attendant illnesses by virtue of their sex. Table VIII provides no indication that maternal mortality in the community is high. It may be it is only a partial record of mostly those dying in hospitals. Few, if any, cases of puerperal sepsis are recorded. In 1931 in age-group 40-60 there were 881 females to 1,000 males, the smallest ratio in all age-groups. This was attributed to a greater number of deaths in nubile ages. Table XXXIV shows percentage of female deaths over male deaths and it can be seen that at all ages more males are carried away by hand of death than females. This of course gives no indication that women in nubile ages are not being carried away. The point needs further investigation, because at one time women were longer-lived. Menant (65) reports 7 women centenarians between 1881-1891, 4 of the age of 100, 1 of 101, 1 of 105 and 1 of 110. She exclaims with some inward satisfaction towards her own sex, "Ces centenaires etaient toutes des femmes!"

TABLE XXXIV.

Percentage of Female Deaths over Male Deaths by Age-groups.

Age-group	0–1	1–20	20–40	40–60	60 & over	Average
Percentage of Female deaths over male deaths	88	80	93	71	92	88

Causes of Death:

Of all the deaths in the world, organs of endodermic origin claim the largest number of victims, about 57% in U.S.A. and England. In 1932-33 Parsis recorded 23% of deaths due to breakdown and failure to function of organs of endodermal origin. For deaths between 1933 and 1942 (Table XXXV) influenza, pneumonia, diarrhoea, dysentery, enteritis, sprue, kidneys and tuberculosis claimed 25%. 19% of deaths by heart failure is no indication of heart disease in the community. Ten years ago typhoid claimed 60% of victims of all fever. There is very little change since then. Typhoid fever in Bombay has become endemic. Deaths in Bombay for the last 2 or 3 years have increased on account of abnormal rise in Bombay population. Congestion has gone up by 50% and filth by 500 tons per day. Typhoid fatalities recorded every month in the Municipal Bulletin of Health show that they are 30 to 50% in excess over last ten years' average. The Municipality says the disease spreads through Food, Finger and Fly. Is there no possibility of eliminating these three F's. People's co-operation is of the greatest value and the Parsis can be relied on to extend it wholeheartedly. In America typhoid fever is no more a leading cause of death. Thirty years ago it was fourteenth on the list; now it is vanishing (Dublin and Lotka, 26). In Germany 50 years ago typhoid was sixth on the list (Westergaard, 94). The situation before the World War II was much different. With literacy and improved sanitation Bombay can achieve similar results.

TABLE XXXV.

Deaths amongst Parsis owing to various causes from 1933 to 1942.

Year	Influenza & Pneumonia	Heart Failure	Enteric and Typhoid	All fevers including Enteric & Typhoid	Diarrhoea Dysentery Enteritis Sprue	Kidneys	T. B.	Suicide	Accident	Other Causes	Total
1933	126	124	16	24	57	56	20	9	14	398	844
1934	126	165	26	43	60	60	26	3	16	437	962
1935	123	233	15	30	65	69	25	7	18	378	963
1936	122	192	16	29	64	66	23	13	20	379	924
1937	134	187	26	34	67	63	14	9	26	404	964
1938	155	206	26	40	68	58	17	10	17	417	1014
1939	60	177	18	30	54	64	22	12	16	468	921
1940	94	171	25	38	58	71	23	10	22	429	941
1941	85	148	24	37	57	64	26	5	25	452	923
1942	81	161	27	34	63	66	18	6	20	391	867
Total	1106	1764	219	339	613	637	214	84	194	4153	9323
Percent	12	19	2.3	3.6	6.5	6.8	2.3	.9	2	44.5	

Tuberculosis:

In the space of the last few years the Parsis seem to have gone worse in the matter of tuberculosis. In British Isles there are at any time a quarter million sufferers in spite of 18,000 fatal cases a year. During the war this number may have magnified. Perhaps the countries ravaged by Germany and Japan will create problems including Germany herself as in the last war. Tuberculosis in Bombay takes an appreciable toll every year. It accounted for 2.4 and 2.0% of total Parsi deaths in 1940 and 1941 against the Hindu percentage of 4.1 and 3.7 respectively. As regards pneumonia and other respiratory diseases Parsi percentage was 10.2 and 10.8 against the Hindu percentage of 33.6 and 33.5 respectively in the same years. Musalmans fare the worst (Table XXXVI), may be because of the purdah. Correlation for T.B. amongst the Parsis is much higher compared with the Hindus, whose habits are far different from those of the former. It may be the Parsis take advantage of T.B. clinics and other doctors more frequently and easily than other communities, so that they are almost always properly diagnosed, while obscure deaths amongst Hindus and Mussalmans are being recorded among other deaths. In Bombay city there was an average of 131.3 deaths per month in 1942 and 161.8 in 1943 (Table XXXVII). The incidence therefore rose by 22.4 per cent, although average percentage of T.B. deaths to total deaths showed a decline. In the years 1939-42 the Parsi Panchayet sent one patient every alternate month to the Bahadurji Sanatorium in Deolali; in 1943 more than one case per month was sent. Ten years previously half that number was being sent. There are other sanatoria besides, where Parsis go. Effects of the war and high prices may be reflected in the rising incidence of diseases. We shall consider this when we discuss nutrition in relation to poverty. T.B. is not a hereditary disease but predisposition to tuberculosis is inheritable as a recessive. It is not a disease which depends on one gene which while in duplex state would show the disease. Assuming that there is a gene which predisposes to T.B., those who carry this gene would be roughly the square of those who show it. If one in every fourteen sufferers (British ratio) die every year, then 17 cases of T.B. fatality would suggest 17 × 14=238 sufferers from T.B.

whose square 56,644 would be almost equal to the Parsi population in the city of Bombay. **That means every Parsi in Bombay is a carrier.** This may not be true, this may be only axiomatic, this may require statistical proof to prove the accuracy of the empirical formula. In any way tuberculosis is a disease which must be guarded against sufficiently in a place like Bombay. We sound a note of warning without being panicky, and state that in 1944 there were not 17 cases of fatality but 28. We suggest a routine check-up of all between the ages 0 and 25 and examination of those adults who may be suspected at a convenient center. This may be by sterioscopy or any other mass method of diagnosis.

TABLE XXXVI.

Percentage of deaths from T.B., Pneumonia and other Respiratory Diseases among Parsis, Hindus and Mahomedans, 1940-41 and 1941-42.

(From Municipal Monthly Health Bulletins)

Disease	Parsis	Hindus	Mahomedans
	1940–41		
Tuberculosis of Respiratory System ..	20 cases – 2.4%	4.1%	9.09%
Pneumonia and other Respiratory Diseases..	87 cases – 10.2%	33.6%	26.6%
	1941–42		
Tuberculosis of Respiratory System ..	17 cases – 2%	3.7%	6.2%
Pneumonia and other Respiratory Diseases..	91 cases – 10.8%	33.5%	28%

TABLE XXXVII.

Number of Deaths from T.B. and their Percentage to Total Deaths.

City of Bombay.

(From Municipal Monthly Health Bulletins)

1942	No.	Percentage	1943	No.	Percentage
January	136	5.0	January	163	6.7
February	126	5.0	February	164	7.4
March	121	4.9	March	175	7.2
April	150	8.1	April	177	6.7
May	127	8.2	May	169	6.0
June	104	6.8	June	154	5.3
July	144	6.9	July	129	3.9
August	110	4.9	August	158	4.9
September	129	6.2	September	169	5.8
October	149	6.2	October	184	5.9
November	151	7.6	November	151	4.9
December	130	5.9	December	149	4.4
Average	131.3	6.3	Average	161.8	5.7

There are three sanatoria which are chiefly made use of by Parsi patients. They are the Bahadurji Sanatorium at Deolali, the Bel-Air Sanatorium at Panchagani and the King Edward Sanatorium at Dharampore. In the last 10 years these sanatoria have supported between them 502 cases for varying lengths of time. We give a summary of their condition at entry and discharge and other relevant particulars in Table XXXVIII. The Bahadurji Sanatorium needs to be put

TABLE XXXVIII.

Particulars of Sanatoria at Panchgani, Dharampore and Deolali.

(1) Bel-Air Sanatorium, Panchgani. (1935-1944).

No. of cases	Males 152	Females 112	Total 264
Maximum Length of Stay	4 years		
Minimum Length of Stay	21 days		

Condition on Discharge	Vertical Curve	Diagonal Line	Horizontal Line	Incomplete Particulars
No. of cases ..	35	107	84	38

(2) King Edward Sanatorium, Dharampore. (1930-1944).

No. of cases	Males 87	Females 35	Total 122

Maximum Length of Stay	Years 2	Months 7	Days 8
Minimum Length of Stay	6 days		

Condition on Discharge	Disease satisfactorily arrested	Much improved with disease quiescent	Generally improved	Stationary	Gone worse	Incomplete particulars
No. of cases	14	38	40	13	12	5

TABLE XXXVIII.—(Continued)

(3) Dr. Bahadurji's Sanatorium, Deolali. (1935-1944).

Age group	No. of patients	Average Length of Stay	Condition on Discharge Percent of the Number				
			Improved or Arrested	Advanced	No change	Died	Incomplete Particulars
			No. & %	No.&%	No.&%	No.&%	No.
20 & below	19	1 yr.	10–52.6	—	—	9–47.3	
21 to 25	21	1y. 6m.	12–57	—	2– 9.5	7–33.3	
26 to 30	15	1y. 2½m.	7–46.6	3–20	4–26.6	1– 6.6	
31 to 40	24	10½m.	12–50	2–8.3	2– 8.3	8–33.3	
41 to 50	13	1y. 1m.	4–30.8	—	4–30.8	5–38.4	
51 & over	19	1y. 5m.	9–47.3	1–5.3	3–15.8	6–31.6	
							5

on the same basis as the other sanatoria. While the latter admit only the patients, the former insists on somebody accompanying the patient to look after. This practice must be stopped. Again there is no provision for segregation of incurables anywhere. The community must provide it early.

It would be worthwhile knowing if tuberculosis is an inheritable disease. For parent and offspring Pearson and Goring separately found a correlation coefficient of 0.5, while for husband and wife the former found a coefficient of 0.24 and the latter found none (Gates, 33b). It would therefore appear that tuberculosis is inheritable. As a matter of fact it is the susceptibility or resistance to this disease that is actually inheritable and not the disease itself. Tuberculosis therefore behaves in this respect in a similar fashion as pellagra, cancer and leprosy. Better care of health is bound to lessen the incidence. The tubercle bacilli should never have a chance to find a fertile ground to multiply. We would therefore emphasise and re-emphasise the necessity of looking after the health of children and youth up to the age of 25.

Diabetes:

The community has a feeling that diabetes is on the increase but we have no definite data. Diabetes is of two kinds, d. mellitus and d. insipidus. The former is recessive and irregular in inheritance while the latter is dominant. If it runs in the family one must conclude that it must be dominant. What we want is a proper knowledge of Parsi pedigrees. The writer has collected a few and one such is given herewith (Fig. 7) but we want a wider knowledge. One of the doctors in Bombay is running a clinic for the treatment of diabetes with the help of a charity trust. We assume he has collected data but we have not yet had the benefit of his findings and we await the same. In the case of diabetes mellitus an outcross from the affected family would produce normal children with total disappearance of the disease. But when these children recross with each other the disability reappears. Some of the allergies like hay fever, eczema and asthma have a similar irregular mode of dominance. One may say that a study of the incidence of asthma in the community is also called for.

According to one study (Hansen, 41) diabetes mellitus is conditioned not by one but by many genes. Its inheritance being irregular and the intensity differing in several cases it has become a tricky disease.

Sometimes d. mellitus is occasioned by glycosuria, which is an accompaniment of pain, fear, sorrow and other psychic syndrome. However it is regarded as an inheritable disease depending upon multifactorial composition of the genes. We do not know very clearly about the intricate sugar metabolism of the pancreatic system and we also do not have a complete and reliable study of the glucose tolerance of the Parsis. We want a specific study on the subject to show that the rising incidence of the disease which a hundred years ago was a rarity in the world is due to the degeneracy of the islets of Langerhans, the ductless glands, which are responsible for the maintenance of proper sugar content in the body.

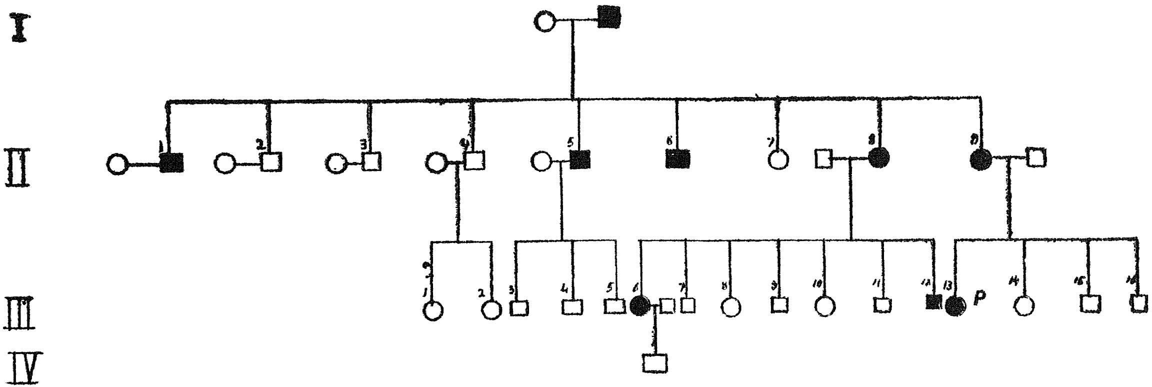

Fig. 7.

A pedigree chart showing incidence of diabetes mellitus in three generations.

In the first two generations all persons are dead. In the third generation III$_2$ is dead. All the rest are alive. Almost all the diabetics are known to have also suffered from high blood pressure and heart trouble presumably rheumatic. Onset of the disease is known to appear round about the age of 40. There have been no cousin marriages except in case of III$_6$. It would appear the case is of d. insipidus and the diagnosis of d. mellitus seems incorrect.

Legend: Shaded = Diseased Condition
P = Propositus
Square = Male
Circle = Female

Physical Build:

Speaking of the Iranian ancestors of the Parsis, Geiger (34) says that the men were of high stature and heavily built. Women were delicate in body and bright in colour, particularly of skin. Eyes of both men and women were large and shiny and majority of them had probably dark-brown hair, shades of light-brown and even red being not uncommon. Above all they possessed brachycephalous skull formation with well-shaped facial expression and general configuration. Haddon (38b) says that Galcha, Tajik and Wakhi, the forerunners of the Pamiri or Iranian stock are preserved in the Parsis of India whose prominent characteristics are: strong brachycephaly with a cephalic index 85, leptorrhine; nasal index 66.8 to 71.3; stature medium to tall, 1.669 to 1.689m. A bio-metric study of the Parsis would show whether they conform to or deviate from this standard. The writer has however collected some data on height, weight and chest measurements of adult Parsis from an Insurance Company. We may examine these data. These data are governed by the following overriding factors, viz.,

(a) It is not **always** the healthy who want to get themselves insured, and

(b) It is **almost always** the healthy who are accepted by the Company.

(c) Underweight in young age and overweight in old age are two of the many points that weigh with the Company in rejecting a case.

Particulars of 162 persons insured were obtained together with their height, weight and chest measurements (Table XXXIX). Although the sample is neither representative nor sufficiently large it shows a few very salient points. In point of height the maximum is from 69 inches upwards, while the average clusters round the medium of 65.0 to 65.8 inches of Haddon. There is almost a short-statured person bordering on pigmyism, but that looks a rarity, others not being below a minimum of 61 inches. The weights in themselves are a clear indication of normalcy with chest measurements perhaps not bad. While we are not concerned with the amounts insured we may say that four of the classes have individuals with large

TABLE XXXIX.

Particulars of 162 Insured Parsis by Age Class.

Age Class	Insured	Height			Weight			Chest Measurement			Amount		
		Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average
20 & below	8	69¾″	54¾″	64″	200	70	116	41″–37½″	26″–23½″	31½″–28½″	Rs. 10,000	Rs. 1,000	Rs. 5250
21 to 30	45	73½″	63″	63″	220	91	144	44½″–39″	29″–27″	36½″–32¾″	60,000	1,000	7077
31 to 40	40	71½″	61″	66″	218	112	149	42″–39½″	31½″–29″	36¾″–35¼″	75,000	1,000	9637
41 to 50	51	72″	61″	62″	201	105	146	42″–38″	31″–27″	36½″–33½″	30,000	1,000	7755
51 & over	19	69″	61½″	66″	202	95	156	43½″–40″	30″–27″	37″–34″	30,000	1,500	6973

sums assured, the average being not below Rs. 5,000 and not above Rs. 10,000. In Table XL we show body-build index arranged according to heights. **Body-build index is obtained by multiplying weight in pounds by 1,000 and dividing the product by the square of height in inches.** It can be easily seen that the mode lies somewhere between 66 and 68 inches of height. If we try and still smoothen our sample and get the arithmetic mean of these heights we come to 67 inches, with persons 24.3, average weight 146.6 lbs., average chest measurement (percent of weight) 54.4, body-build index 32.6. In comparison with different nationalities (Table XLI) Parsis fare well. They have a better body-build than their Mahomedan and Christian brethren who appear to have a slimmer build. Parsis have a build approximating to Poles who are supposed to be stocky. We would however again repeat that the sample is too small and is selective. This is no indication of the general conditions of the community, which require a careful scrutiny along similar lines.

Mental Illhealth:

Mental illhealth, as the very name implies, is a disease that exists in varied forms with amentia at one extreme and dementia at another. A person who is able to manage his affairs efficiently and is capable of adjusting himself in his social and private life to his own advantage is a mentally healthy person. The definition may even exclude those who may be apparently normal but who are capable of a mental breakdown under certain circumstances. Society can be stratified into three fairly distinguishable groups, viz: normal, neurotic and psychotic. While the emotions, attitudes, interests and wants of a neurotic are not in unison with the general environment in which he exists, he is capable of passing in society as a tolerable unit. A psychotic has his eccentricities more pronounced. He is incapable of managing his own affairs. His interests and wants are markedly different from those of a normal person and as he finds his environment more and more uncongenial to the satisfaction of his own requirements, he withdraws from society by degrees until the manifestation of mental disease in one of its forms. Feeblemindedness is, in ordinary parlance, an arrest-

TABLE XL.

Data showing Body-Build of 162 Insured Parsis.

Height in inches.	No. of Persons.	Average weight in pounds.	Chest measurement as per cent of Height in inches.	Body-Build Index (weight x 1000 / (Height)^2)
61	4	103	50.8	27.6
62	1	115	55.6	29.9
63	5	111	52.6	27.9
64	11	131	53.9	31.9
65	16	131	55.3	31.0
66	24	139	53.7	31.9
67	21	143	53.7	31.8
68	28	158	55.8	34.1
69	11	152	53.6	31.9
70	21	163	54.2	33.2
71	16	161	53.5	31.9
72	3	178	57.6	34.3
73.5	1	186	55.7	34.4

ment of mental growth. It may be due to heredity or to some accident or disease, during the period conception-death, which may impede or impair mental development or even conduce to deterioration. The Mental Deficiency Committee appointed by the British Medical Association in its Report (1932) defines mental deficiency as 'a condition of arrested or incomplete development of mind existing before the age of 18 years, whether arising from inherited causes or induced by disease or injury.'

TABLE XLI.

Comparison of Physical Development of 162 Insured Parsis with that of other Nationalities.

Nationality	Height in inches	Chest measurement as per cent of height	Body Build Index	Source
English	67.75	51.2	31.59	Lorimer and Osborn, Dynamics of Population, p. 101.
Scotch	67.93	51.3	31.41	
Irish	67.46	51.7	31.41	
German	67.73	52.0	32.31	
French	66.37	52.5	32.28	The Problems of a Changing Population, Report of National Resources Committee, May 1938, p. 150.
Italian	65.03	53.8	32.63	
Polish	66.7	53.4	32.73	
American :				
White	67.71	51.6	31.56	
Negro	67.7	51.2	32.63	
Indian :				
Parsi	67	54.4	32.6	
Mahomedan (Age 30)	67	..	30.29	S. L. Tuli, Insurance Vade Mecum (1940–41) Lahore. 15th issue.
Christian (Age 30)	67	..	29.18	

In England and Wales in 1932 the Mental Deficiency Committee estimated the socially inefficient children and adults at 300,000 or 8 per 1,000 of population. A few years later a similar committee in its report published in 1941 stated that 'In 1938 there were 158,723 persons (3.9 per thousand of the population) suffering from mental disorder notified as under care in England and Wales, and 89,904 mentally defective patients (2.2 per thousand of the population) were in institutions and under statutory care.' This gives a number of 6.1 per 1,000 of population only under care. It does not account for unobserved, unnotified cases which may be as many. In America at the end of 1933 there were 400,000 persons under care in hospitals and probably a million more outside. These figures include insanity also. Popenoe and Johnson (78) say on the authority of Pollock and Malzburg (77) that 5% of the total population were, are and will be committed to a mental hospital, another equal number not being fortunate in obtaining this treatment. Of all the beds in American hospitals, victims of accident or physical disease and patients of child labour occupy only half, the other half going to mental patients. Only one disease, dementia praecox, involved a loss of one million dollars a day to the U.S.A. some 10 years ago. The White House Conference of 1930, according to the same source, calculated some 15% or 20 millions of the population as not exceeding 12 years of age in intelligence. Some 13% do carry on their work though mentally retarded and 2% cannot manage their own. Thus some 30% of the population was at that time calculated in the U.S. of America as a low grade population. Uptodate figures for U.S.A. are given by Landis and Page (55). At the end of 1935 there were 590,000 patients in United States Hospitals, i.e. 1 in every 200 of adult population. Using the same formula as that of Pollock and Malzburg, they conclude that while out of every 20 born alive 1 will spend his days in a mental hospital, at least 1 in 10 will in all probability be incapacitated by mental disease some time during his life, though not committed to a hospital. By 1935 the U.S.A. had invested a capital of $500,000,000 for the care of mental disease only and the annual expenditure exceeded $100,000,000. This does not include the economic loss sustained by unemployment of these large numbers of patients, which estimate seems to have been taken into consideration by Popenoe and Johnson quoted above.

It is difficult to give similar figures for India, since facilities for care and treatment of mental diseases in India are still at a low level. Indian hospitals are in the main 'Asylums' whose primary function is to 'shut up' the unfortunate from doing any harm to society in particular and to themselves in general. There is hardly any attempt at classification and records are not so kept as to facilitate research. This is very important since it is now definitely established that feeblemindedness and some of the forms of insanity are inheritable. Attempt at classification is not new. Since Urquhart (1909) and Meyerson (1923) there has been much reshuffling and we see no reason why our hospitals should not adopt scientific methods of classification.*

According to the Indian Census in 1931, there were 120,304 mentally afflicted in India.** This gives a ratio of 34 in 100,000, which is too low. On the basis of British and American figures the total number of the mentally afflicted should be 3½ millions. The Census Commissioner, Dr. J. H. Hutton, himself is sceptic about his figures. In the words of Dr. Hutton himself:

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* I. American classification of stages of insanity (Landis and Page, 1938):

1. Senile dementia
2. Cerebral arteriosclerosis
3. General paresis
4. Alcoholic psychoses
5. Dementia praecox
   (a) Simple, (b) hebephrenic, (c) catatonic, (d) paranoid
6. Manic-depressive psychosis
7. Paranoia
8. Involutional melancholia
9. Neuroses or Psychoneuroses
10. Psychopathic personalities.

II. British classification of all mental diseases:—
(Report of the Committee on Mental Health appointed by the British Medical Association, 1941).

1. Oligophrenia (amentia, mental deficiency)
   a. Idiocy
   b. Imbecility
   c. Feeblemindedness (moron)
   d. Moral deficiency
2. Neuroses and psychoneuroses
   a. Anxiety states
   b. Compulsions, obsessions and phobias
   c. Hysteria
   d. Exhaustion states (including neurasthenia)
   e. Mixed and other forms
3. Schizophrenic psychoses
   a. Dementia praecox
      (i) simple, (ii) hebephrenic, (iii) catatonic, (iv) paranoid
   b. Paraphrenia
   c. Other forms
4. Psychopathic constitution (including paranoia)
5. Alcoholism and Drug Addiction
6. Sexual perversions
7. Delinquency

"The vague and unsatisfactory nature of the return of insanity is admirably illustrated in the different views of Census Superintendents themselves; thus while one says 'idiocy is usually a congenital defect and one would have expected a much higher proportion of insane in the earlier age periods,' another condemns his returns for showing just such an increase on the ground that 'complete insanity manifests itself at adolescence' and 'returns to be accurate must exclude the congenitally weakminded.' In Assam one district showed an extraordinary rise in the number of insane in 1921 from 52 to 255 and a similar drop to 62 in 1931, while an adjoining district with a smaller population living under almost identical conditions shows in 1931 a rise from 242 to 430. The return of insanity is naturally lowest in the lowest age groups. Lunacy is likely to be undetermined among young children; idiocy is unlikely to be admitted."

Depending upon Census data Markham (64) says:—

"The abstract of the Census of India, 1931, page 11 records 120,304 persons as insane out of India's total population of 352,837,778. On the same proportion there would be 30 insane Parsis in the Bombay Presidency. The Census authorities are careful to point out on page 5 of the abstract that the figures of 120,304 'must be accepted with the greatest reserve' but even if the number is doubled it will unfortunately be found that the number among Parsees is not 60—but no less than 200."

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8. Affective psychoses
    a. Manic-depressive psychosis (cyclothymia)
        (i) Elation, (ii) Depression, (iii) Stupor
    b. Involutional melancholia
9. Confusional states
10. Epileptic psychoses
11. General paralysis
12. Other psychoses associated with organic disease
13. Dementia
14. Undetermined types

In a letter to the writer the Superintendent of one of the Mental Hospitals regretted that '. . . our records are incomplete for your purposes.' A very simple quotation from the Bombay Mental Hospitals Report of 1933 will show how our patients are classified:—

"The principal predisposing and exciting causes were *mental stress* 129 against 111 in 1932 and *mental instability* 93 against 140. Owing to *defective history* the causes of insanity could not be ascertained in 101 cases as compared with 92 in the previous year." (Our Italics).

No further comment is necessary.

** Census of India—Vol. I, Pt. 1—Report—p. 254.

It is true that this number has remained almost constant for the last 12 years and more but it is a fallacy to apply the rule of three to a problem that depends for its outcome on so many factors. Everybody who does not die early has to age and yet every old person does not suffer from senile dementia. Most old people become forgetful, confused and mentally lax, yet they all do not suffer from a physiological breakdown of the cerebral arteries and develop cerebral arteriosclerosis. A number of old men may have been infected by syphilis in their young age and yet serologically there is no evidence of the central nervous system being affected in all cases and they do not suffer from general paresis. Some old men drink heavily but they all do not show signs of delirium tremens or of any other alcoholic psychosis. Again those of the diseases whose aetiological basis is heredity are not to be found in all and sundry. Thus we cannot put down a rule of three and draw our conclusions from analogy.

If we accept the official version that the Census is a faulty record in respect of mental diseases and if we further assume that a similar ratio as in other countries prevails in India we have about 3½ million mental cases. If we further assume the same rate to prevail among the Parsis we get 11,500 cases who should be mentally diseased — men, women and children — beginning with idiocy and ending with insanity. If we however take the percentage deviation of the Indian Census from its corrected number we find that the Parsis should have just under 6,000 affected. In an earlier study the author (24) found some 70 persons suffering from one form of mental disorder or another out of some 6,000 individuals. This works out at 1 in 85. If we refer to Table L in Chapter V, we find 28* mental cases from out of a population of 4,500, giving a ratio of 1 in 160. All these are however assumptions leading us nowhere. A range of 3,000 to 12,000 mentally afflicted persons is too wide a range to be called scientific. What we want is detailed and comprehensive study on the subject.

Some Pedigrees:

Between 1935 and 1940 the writer compiled a few pedigrees of diseases like T. B., asthma, diabetes, paralysis, blindness, insanity, etc. after a careful interview with patients themselves or their relatives. Half of these are pedigrees of insanity or mental illness. We give below a few of these pedigrees.

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* Epilepsy 5, Fits 1, Insanity 9, Subnormality 13.

Explanatory Note: Some words are abbreviated and their explanation is given below:—

W = Wife; S = Son; D = Daughter; Sis = Sister; Br = Brother; d. inf. = died in infancy; misc. = miscarriage.

S_4 (16, 14, 10, 8)=4 sons whose ages are 16, 14, 10 and 8 respectively. Similarly for daughters. Numerals in parentheses show ages of persons concerned at the time of taking notes.

No names are given. Miss A, Mr. B., etc. are only fictitious initials. They however show the civil status and the sex of the person concerned.

Propositus is the person whose case has been reported.

All the following eight cases are Central Mental Hospital cases:—

Case 1—Miss A. Spinster aged 38. In 1932-33 lost balance of mind. Stayed in Mental Hospital for 4 or 5 years. Readmitted in 1937 for 5 or 7 months. Was a municipal teacher. A brother aged 28 insane, an aunt (father's side) insane.
Economic status: Lower middle class.
Notes taken in 1940.

Case 2—Mr. B. married (45). W (41), S_4 (16, 14, 10, 8), D (12), 2 d. inf. Himself insane, two paternal uncles and two paternal aunts insane.
No cousin marriage.
Economic Status: Lower middle class.
Notes taken in 1937.

Case 3—Mr. C. married (37). W (36), S (1½), Br. (32), Sis. (28, 27). Sis. (28) insane. Began deteriorating from the age of 10. Maternal grandfather and paternal uncle's son insane. Neuropathic taint in many families bearing the surname of this family. Interconnected with a surprisingly large number of neuropaths. It all started with a middle class Parsi who was a successful fish merchant three generations ago.
Economic Status: Poor.
Notes taken in 1938.

Case 4—Mr. D. (51) married. W (39), S (11), D_3 (15, 13, 5). Himself insane. Uncle's daughter affected. Himself

committed to Central Mental Hospital first in 1907 for 6 months. Somewhere about 1920-21 was married to a girl 12 years his junior. Before second commitment in 1926 had 3 children (1 S, 2 D). Before his third commitment in 1936 had his last child which was born in 1932. He died in 1943. No contact with the family but, if renewed, the products of a dysgenic marriage would be worth a study.
Economic Status: Poor.
No cousin marriage.
Notes taken in 1940.

Case 5—Mr. E. (71) married. W (65), S_3 (40, 35, 27), D_3 (45, 42, 38). Himself and wife blind. S (40) blind. D (38) weak-eyed. Cannot go out alone. Has swollen hands and legs. D (45) insane. D (42) married to a cousin, has an insane son aged 21 and a normal daughter aged 9. Cousin marriages throughout the line. Insanity and blindness both appear in the family.
Economic Status: Poor.
Notes taken in 1938.

Case 6—Mr. F. (60), an Irani, married. W (38), S (5), D_3 (14, 12, 8). Himself suffering from enchematous condition of feet and senile debility. Besides weakminded. Holes and pus forming in feet. D_2 (14, 12) weakminded, latter so after an attack of typhoid. Four years after the attack son had it when mother was presumbaly the carrier having tended to a typhoid patient. Son became peevish.
Economic Status: Very poor.
Notes first taken in 1935.

Then the two girls were contacted. They were definitely subnormal. Both took to vicious life. Sexual libido was the focal point. They are both married (1944) and harry their husbands for sexual satisfaction. D (8) now grown up, dresses smartly, has good looks, and is married but her manners portend a similar fate as her two sisters. No cousin marriage.

Case 7—Mrs. G. (45). Separated from husband. S_3 (20, 17, 8), D (21). S (20) weakminded, S (17) somewhat weakminded. Husband a drunkard, was beating his wife, has kept an alien mistress. He has several brothers and sisters. One brother has also kept an alien woman but she lives amicably with his family of wife and children. D (21) while in teens fell in love with a worthless man who died of T.B. in a year or so. She is married again to an intelligent but shiftless man. Her former mother-in-law reported begging and the father-in-law, a retired guard, ran away with his sister-in-law (wife's sister). Mrs. G. well-connected. Belongs to a respectable family.

Economic Status: All middle class families.

Notes taken in 1936.

The pedigrees shown in cases 6 and 7 are distinctly neuropathic and the strain seems to run in the families.

Case 8—Mr. H. (57) married. W (40), S_4 (18, 15, 13, 10), D_2 (8, 4), 3 misc., 1 d. inf. Party insane since March 1937. Before him his father, mother, 2 brothers and 1 sister were all insane. In all there were 11 sibs—7 brothers and 4 sisters.

Economic Status: Mid. class.

Notes taken in 1937.

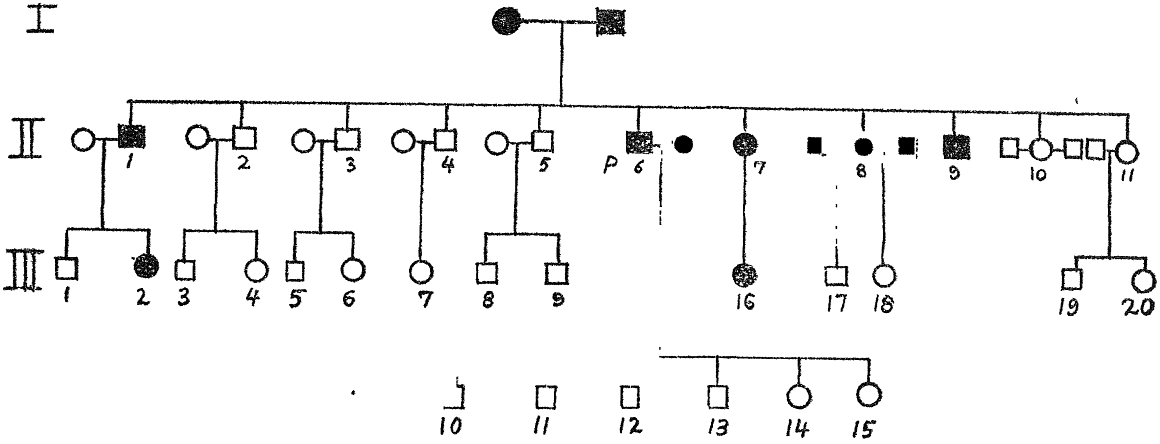
In fig. 8 we give a pedigree chart of this family

II 6—Propositus, the party, designated P in the chart, lost balance of mind after a financial loss. His two brothers (II 1, 9) did likewise after loss of service. The cause of imbalance of parents' mind is not known, nor is it known if they were cousins. P has 4 sons and 2 daughters but none is so far known to have been affected.

II 1, 7—both married and each has an insane daughter.

They are married to apparently normal consorts.

III 2 was betrothed to a man who went to jail and the match was broken off. Married another who ran


I
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III
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P 6
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Fig. 8.

PEDIGREE CHART OF CASE NO. 8 SHOWING INHERITANCE OF INSANITY IN THREE GENERATIONS.

Legend: P = Propositus. Square = Male. Circle = Female. Shaded = Affected by insanity.

away to Calcutta and obtained a divorce. Married a third who went to jail in 8 days after marriage.

Parsi Panchayet and N. M. Petit Fund Patients:

The Parsi Panchayet and the N. M. Petit Charities help poor Parsis for maintenance of patients at the Central Mental Hospital, Yeravda, the former from 1936 and the latter for nearly half a century or more. The former has kept fairly extensive data, but we get very little from the latter. We will analyse these data only to emphasise the paucity of material.

Panchayet Patients:

The Panchayet has on its rolls 25 cases. Of these there are 12 males and 13 females. (Table XLII).

Age at commitment:

TABLE XLII.

Age at Commitment of Panchayet Patients.

Age Group		Below 20	21 to 30	31 to 40	41 to 50	51 to 60	Age not stated	Total
No. of Patients	Male	1	4	5	1	1	..	12
	Female	..	5	3	4	..	1	13
Total ..		1	9	8	5	1	1	25

There are 18 persons committed before the age of 40 against 7 above that age. In the last age class we have only one male committed at the age of 51. Even the female whose age is not specified was committed at a very early age, definitely before 40. Her father supported her for years before he died and then the case came up before the Panchayet for assistance. Thus most patients appear to have been committed at an early age. Since acquired organic diseases like senile dementia, cerebral arteriosclerosis, alcoholic psychosis and general paresis should appear at an advanced age, our analysis strongly suggests the hand of heredity but we would wish to have more detailed personal data before coming to a final conclusion.

Place of Origin:

Of the 25 cases, 21 are from Bombay, the rest being one each from Calcutta, Poona, Ahmedabad and Songadh.

Bombay's tall score may be due to the fact that there are good facilities for medical and financial help, besides being easy of approach to Yeravda. It is significant that while 24 cases are from city life there is only one from rural life (Songadh). In city life, especially in Bombay, with small flats in which most people live, it is not possible to look after these unfortunates well and that may explain the greater incidence. People all over the world are usually chary to send away females at once to mental hospitals but here the ratio is almost equal.

Education and Economic Status:

Education of each individual is not known and although all are economically poor or low middle class Parsis, we know their nature of employment or social status. The largest class is the dependent class — dependent on husbands, fathers, mothers, brothers, sisters, etc. They number 18. The rest include 2 salesmen, 2 clerks, 1 teacher, 1 hotel-keeper and 1 book-binder in a press. Of the social status of guardians we have 7 clerks, 1 typist, 1 mechanic, 1 agriculturist, 1 tailor, 1 hotel-keeper and 3 menials. Of the rest, 8 are widowed mothers, and one had some money of her own which she had given away in charity presumably after the onset of insanity.

Placement in Family:

8 were born first, 4 second, 3 third and 1 fourth. The placement of the rest is not known. Considering mothers' ages at which the propositi were born we find that 2 were born before the age of 20, 5 between 21 and 25, 3 between 26 and 30, 1 between 31 and 36 and 1 between 35 and 40.

Civil Condition:

Among the married, women seem to be the greater victims. Two-thirds of the patients are unmarried and most of them

TABLE XLIII.

Civil Condition of Panchayet Patients.

	Married	Unmarried	Juvenile	Total
Male ..	2	9	1	12
Female ..	6	7	..	13
Total ..	8	16	1	25

appear to have fewer chances of marriage in later life so as to be able to pass on their defective heredity to posterity. (Table XLIII).

Of the eight married patients, 3 have no children. The remaining 5 have between them 8 sons and 8 daughters, average of 3.2 which is fairly high. It would be worthwhile following up these cases.

Mortality:

We are aware of only 3 cases of mortality.

Admissions:

We know of only one case being admitted for the third time. The rest appear to be first admissions.

Present number: Of the 25 patients, three are dead, two left of their own accord or were discharged and the rest are being maintained by the Panchayet.

Petit Fund Patients:

112 admission forms of the Petit Funds were examined. We give below analysis of whatever we got from these forms. (Table XLIV).

Age at Commitment:

TABLE XLIV.

Age at Commitment of Petit Fund Patients.

Age Group		Below 20	21 to 30	31 to 40	41 to 50	51 to 60	61 and over	Age not stated	Total
No. of Patients	Male	7	10	18	9	2	–	11	57
	Female	2	6	14	12	2	4	15	55
Total		9	16	32	21	4	4	26	112

It is significant to note that barring 26 cases whose ages are not specified we have only 8 cases above the age of 51. The rest, viz. 78, are below the age of 50. The largest in evidence is between 31 and 40.

Place of Origin:

More than three-fourths of the cases are from Bombay, only about one-fourth being from mofussil.

Economic Status:

This is known in only 14 cases, majority of whom are clerks, 1 fitter and 1 priest.

Civil Condition:—This is known in only 27 cases as analysed below. (Table XLV).

TABLE XLV

Civil Condition of 27 Petit Fund Patients.

	Married	Unmarried	Total
Male	3	9	12
Female ..	10	5	15
Total	13	14	27

We find that in this sample there are 13 married and 14 unmarried. Unless we find details of all other cases we cannot say if it is representative of the whole group, but it does not compare with the Panchayet sample.

Mortality:

Forty persons are reported dead. Mortality of 35% of patients is explained by the fact that some 20 cases were admitted about 25 to 45 years ago who must have died naturally and there are 14 cases about which we are doubtful whether they are living or dead.

Current Cases:

There are about 40 patients still in the hospital and the rest have been discharged. One seems to have absconded and not been traced thereafter.

We admit that the above study is not enough and it requires more comprehensive and much wider data than what we have presented.

Children of Propositi:

We saw above that 5 propositi had between them 16 children or 3.2 per propositus. While this gives us no clue as to the real state of fertility amongst mentally diseased persons it is an important question from the point of view of heredity. Kallmann (49) divides schizophrenic or dementia praecox cases into 4 diagnostic categories as (1) hebephrenic, (2) catatonic, (3) paranoid and (4) simple. He considers the first two as nuclear and the last two as peripheral group. The marriage rate of the nuclear group is half that of the normal population while the number of children per propositus is a little more than one. The number of children per propositus in the peripheral group is 4.2, 87% of whom are born before the disease has developed. These two groups have a hereditary basis and as such it is important to know in what group or classification head the Parsi propositi stand. Kallmann also found some sort of correlation between tuberculosis and mental disease. In quite a good few cases the writer has come across Parsi insane patients with physical and other handicaps. As an instance we may refer to case No. 5 above where insanity and blindness are associated. In yet other cases T.B. and diabetes have been found in association with insanity.

Probability of Commitment:

What part the law of probability plays in determining the appearance of disease in a family can be seen from the following study of 200 affected families of Gallilopolis, Ohio.

Androp (3) studied each sound or unsound propositus with reference to his or her blood relationship or next-of-kinship, such as, brothers and sisters (half and full), father and mother, blood uncles and aunts (half and full), grandparents and first cousins. He concluded that 'the probability of commitment for a mental disorder is in direct proportion to the incidence of mental disorder in the families of the parents of such an individual.' He divides his categories in three groups, viz:

A=No known commitments for mental disorder in the family.

B=Not over two commitments or 15% of the members of the family.

C=More than two commitments or over 15% of the members of the family.

Assuming that there are random marriages between these three groups in six different ways he gives the following result:—

	Type of marriage		Probability of commitment in children
1.	A × A	:	28%
2.	A × B	:	35%
3.	A × C	:	38%
4.	B × B	:	51%
5.	B × C	:	51%
6.	C × C	:	70%

A study along similar lines on 200 Parsi patients in the Central Mental Hospital at Yeravda would be well worth the trouble by an able psychiatrist.

CHAPTER V.

MOLOCH OF POVERTY.

Perpetual Flux:

Every landslide carries in its avalanche root and branch a large amount of life and deposits it in another place. If the situation is favourable to growth the life goes on again in the modified environment but those that cannot adapt themselves to the new environment are lost to the world. Much the same thing happens when a social landslide carries in its wake the least able or stable elements disclosing ugly facets. Nature is always in a perpetual flux. So is human population more or less. If one section submerges, another comes up. Decades ago the Parsi community boasted of not having a single beggar in its ranks. Today that proud boast lies low. Apart from actual and professional beggary, we have before us a sorry spectacle of armies of economically hard hit families asking for help from funds and philanthropic individuals. Whether these armies arise because of the prevalence of the dole system or whether the dole is there because these armies are there is a moot point. But it is fairly certain that before the dole appeared the poor were there and as the dole was there the poor multiplied. Occasionally there is a flutter in the dovecot of the Parsi intelligentsia and invectives are heaped on the dole system. Granted that the dole system is bad, what are we to do with the stalking armies—those that lead a miserable life, a life of hand-to-mouth existence, a life that must end in lowered vitality, loss of health and jobs, weaker children and ultimate dependence on charity to continue existence, a sort of vicious circle? **We are writing this chapter with a view to stimulate thought, conscious of the fact that inordinate, aimless charity should do more harm than good but if directed properly it must produce good results.**

Means Test:

Before deciding to give any help charity funds get elaborate forms filled by applicants. These forms are then studied and the condition of the family investigated into. All income whether earned or by way of help is added up, rent subtracted and the balance divided by the number of persons in the family. This gives per capita income. If this is above

Rs. 15 the application is turned down: if below, the family is adjudged fit for help. Ten years ago the Panchayet helped more than 2,000 families. By about 1940 it was realised that the burden was too heavy and it was reduced by 1941 to about 1,200. Reduction in number was caused by three things, (1) by lowering per capita standard to Rs. 11, (2) by increased employment and earnings in families on relief due to the war and (3) by weeding out shirkers. The burden kept on weighing down the resources until at last in 1940 an awakening came that the Trustees could not go on. Plans were devised and for the first time a searching inquiry came to be made. It was found that generality of the recipients of relief were eligible. What could we do? We had to devise an unpalatable and most unscientific method. The standard of help was arbitrarily brought down from Rs. 15 per head to Rs. 11 and certain other drastic measures taken. A number that was more than 2,000 had already come down to 1,700 in 1940 and had further gone down to 1,200 by 1941, where it was practically stabilised until recently. The present inquiry discusses most of these families. Due to present abnormal conditions the per capita standard now varies between Rs. 15 and 20 depending on the circumstances of each case.

Western Standard:

Compared to any western standard our standard of Rs. 15 per head is more or less ludicrous. Take for instance Booth's standard. In his 'Life and Labour of the People of London' he gives the standard as 18s. to 21s. per week for a moderate family. Rowntree who followed this up with his observations on the working class conditions of York in 1901 (Poverty: A Study of Town Life) put down his standard at 21s. 8d. a week for a family of husband, wife and 3 children after allowing for considerable economy in buying and house-keeping. A similar inquiry made by Bowley and Burnett-Hurst a little before World War I effected a few changes in the standard of life and calculated the expense at 37s. 7d. a week for 'Bare Physical Efficiency.' Rowntree's 'Human Needs Standard' is however 57s. 8d. (Carr-Saunders and Jones, 11). Before these figures the 15-rupee standard appears most arbitrary, unscientific, unimaginative and ludicrous.

Classification of Families:

We classify the above families on relief under 10 heads: 1. Couples with Children, 2. Widows with Children, 3. Widowers with Children, 4. Deserted Women with Children, 5. Widows with Grand-children, 6. Composite Families, 7. Incomplete Families, 8. Couples, 9. Single Women, 10. Single Men. The last two are in no sense families and the two preceding them are families in a limited sense. The total population concerned (Table XLVI) comes to 4,447. The first four groups contain cohesive families. The fifth class is very small. The sixth class includes such families where two or more families perhaps may be living together each with a distinct head of its own; e.g. two brothers or two sisters may be living with their children, or two cousins may be living similarly, or even there may be other degrees of relationship. Incomplete families, the seventh on the list, are not actually families. They are incohesive in that they may be brothers and sisters, or uncles and nephews and/or nieces, or aunts and nephews and[or nieces, etc. The eighth class of couples may be childless or with grown-up children living separately. It may be that some of their sons and daughters may have been included in any of the above groups. The last two need no explanation. We thus find that there are 1,212 applicants or heads of families. If we deduct 270 lone persons we get 942 heads of actual families.

Composition of Families:

By far and large the most predominant group is couples with children, followed by widows with children. The former comprises 50% of the total population, the latter 25%. Rest of the groups or classes are contained in the remaining 25%. Couples with children give us a ratio of 5.5 **persons** and 3.3 **children** per family. As we go down we find the average number of children getting smaller and smaller. It is true that in group 1 there are a few young families but the small number, even as it is, gives a tell-tale story of a diminishing birthrate, after allowing for a small number of grown-up sons and daughters not accounted for. 106 other relatives and dependents in class 2 of widows with children include more 'other relatives' than 'dependents.' That shows that a number

TABLE XLVI.

Classified List of Families on Relief in 1942 From the Parsi Panchayet Showing Population Composition.

FAMILY GROUP	Applicants Male or Female	Females including wives	Sons	Daughters	Other relatives or dependents	Total	Average No. of children per family	Average No. of persons per family
1. Couples with children	416	416	672	703	96	2303	3.3	5.5
2. Widows with children	281	—	331	389	106	1107	2.5	3.9
3. Widowers with children	35	—	43	41	15	134	2.4	3.8
4 Deserted women with children	27	—	33	41	10	111	2.7	4.1
5. Widows with grand-children	7	—	5	5	1	18	1.4	2.5
6. Composite families	73	152	20	35	18	298	0.75	4.08
7. Incomplete families	41	41	—	—	—	82	—	2
8. Couples	62	62	—	—	—	124	—	2
9. Single Women	222	—	—	—	—	222	—	1
10. Single Men	48	—	—	—	—	48	—	1
Total ..	1212	671	1104	1214	246	4447	—	—

of widows go to live with their relatives after widowhood. **The comparatively small number of persons per family completely upsets the general belief that because of growing numbers in the family one is obliged to fall on charity.** If we look at this question from a different angle, we are obliged to inquire as to how is it that small families have to subsist on doles. Have they not sufficient wherewithal?

Earnings:

Table XLVII provides the clue. Let us examine the earnings of principals and dependents including sons, daughters and other relatives in Groups 1 and 2, which comprise 75% of the population.

Group 1: Out of 326 principals, 300 have their earnings below Rs. 60 and out of 146 dependents 142 earn below Rs. 60. Really speaking the largest number, viz., 101 out of 142, earn upto Rs. 20 only. Therefore the contribution made to the total earnings by this latter class of people is not appreciable. Group 1 has an average per family of 5.5. According to 11-rupee standard, modal earnings should be about Rs. 60. Instead the mode lies between 21 and 30 for the principal earners, while those falling between Rs. 51 and 60 are only 8.5% of the total earners. There are nearly 84% of the families with earnings well below the average. Evidently there is underfeeding to that extent in this class and consequent malnutrition.

Group 2: Almost all of the widows earn up to Rs. 20 while of their 176 dependents just 10 earn above Rs. 60. This class has an average of 3.9 persons per family. Therefore modal earnings should be about Rs. 42. More than 75% earn below this mark. We can safely say that this class of people lives a hand-to-mouth existence.

Unemployment amongst Families on Relief:

Table XLVIII shows that there are 894 persons unemployed, nearly 1|5th of the population on relief. This would appear to be a large number from the point of view of charities, for if we could find employment for a large number of them the burden on charities would be reduced. We should, however, not forget that we are dealing with a class of

TABLE XLVII.

Earnings of Principals and Dependents, including Sons, Daughters and other Relatives.

	Couples with Children			Widows with Children			Widowers with Children			Deserted Women with Children			Widows with Grand-children		
	Principals	Dependents		Principals	Dependents		Principals	Dependents		Principals	Dependents		Principals	Dependents	
		Sons	Daughters		Sons	Daughters		Sons	Daughters		Sons	Daughters		Sons	Daughters
Upto Rs.20	62	31	70	111	36	74	6	7	6	12	1	8	1	2	4
21—30	93	21	4	3	17	8	3	4	1	—	5	—	—	—	—
31—40	65	10	1	—	16	2	2	1	—	1	—	—	1	—	—
41—50	52	3	—	—	8	—	2	—	—	—	1	—	—	—	—
51—60	28	2	—	—	5	—	—	—	—	—	—	—	—	—	—
61—70	13	2	—	—	5	—	—	—	—	—	—	—	—	—	—
71—80	8	1	—	—	2	—	1	—	—	—	—	—	—	—	—
81—90	2	1	—	—	1	—	—	—	—	—	—	—	—	—	—
91—100	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—
101 & over	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Total	326	71 + 75 = 146		114	92 + 84 = 176		14	12 + 7 = 19		13	7 + 8 = 15		2	2 + 4 = 6	

TABLE XLVII—(continued).

	Composite Families		Incomplete Families		Couples		Single Women	Single Men
	Principals Males	Dependents Females	Males	Females	Principals	Dependents	Principals	Principals
Upto Rs. 20	15	45	5	22	26	19	77	16
21—30	20	—	2	—	11	—	—	—
31—40	8	1	1	—	—	—	—	—
41—50	3	1	—	—	—	—	—	—
51—60	3	1	—	—	—	—	—	—
61—70	3	—	—	—	—	—	—	—
71—80	—	—	—	—	—	—	—	—
81—90	1	—	—	—	—	—	—	—
91—100	5	—	—	—	—	—	—	—
101 & Over	—	—	—	—	—	—	—	—
Total	58	+48=106	8	+22= 30	37	+19= 56	77	16

TABLE XLVIII.

Unemployment amongst Families on Relief.

No.	Classification	No. of families	No. of applicants unemployed	Number of dependents unemployed			Total	Grand Total
				Sons	Daughters	Other dependents		
1.	Couples with children	416	90	20	54	61	135	225
2.	Widows with children	281	167	20	62	72	154	321
3.	Widowers with children	35	21	6	10	5	21	42
4.	Deserted women with children	27	14	1	1	7	9	23
5.	Widows with grand-children	7	5	—	—	1	1	6
6.	Composite families	73	49					49
7.	Incomplete families	41	26					26
8.	Couples	62	25					25
9.	Single Women	222	145					145
10.	Single Men	48	32					32
	TOTAL ..	1212	574	47	127	146	320	894

people who are quite undernourished. As such, a number of men above the age of 45 and women above the age of 36 become useless for hard work for long hours of the day. Besides employers prefer younger persons, because they give more work on less pay. When so reduced (Table XLIX) we find only 37 men and 164 women who can be considered employable.

Incapacitating Maladies:

Employability is largely dependent on physical and mental well-being. Without going into the details of a large number of diseases a survey was taken of only the incapacitating maladies and defects and it was found (Table L) that 97 persons were found to be affected by one or the other of the ailments listed. It is not an exhaustive list and the ailment may need a stricter scrutiny to allow of no recalcitrance or wastrelism under one pretext or another. But at one time the writer (24) had found that nearly 50% of the families on relief suffered from one disease or another and 97 incapacitated persons, about 5%, in the present case, are about the number one should reasonably expect.

Avocations:

Most of the avocations followed by the above classes of people are such as can seldom be expected to yield higher returns in future (Table LI). Except a few most of the avocations are petty in nature. Women's are not avocations in actual sense of the term. It is just some work that they do to augment income. As long as the poor have to follow such petty avocations and if they are mentally unfit to do anything else or if they are physically unable to do any other extra labour to augment their income, and **as long as the community fails to give them a helping hand in a concrete manner, not in the manner of supercilious patronage, doles by way of subsidisation of income must continue. But this must be done in a limited number of cases for limited periods, during which time the rehabilitable families must be saved.**

Per Capita Income:

An analysis of income per capita reveals a sorry tale (Table LII). There are 12 families who have nothing left after deducting rent and there are 22 families who have not enough to pay even rent. There are 803 families with income

TABLE XLIX.

Number of unemployed upto the age of 45 for men and 36 for women.

CLASSIFICATION	NO. OF PERSONS		
	MALES	FEMALES	
1. Couples with children	17	119	
2. Widows ,, ,,	—	12	
3. Widowers ,, ,,	1	—	
4. Deserted women with children	—	5	
5. Widows with grand-children	—	—	
6. Composite families	7	22	
7. Incomplete families	9	1	
8. Couples	1	4	
9. Single Women	—	1	
10. Single Men	2	—	
TOTAL ..	37	164	

(inclusive of charity help) ranging from Re. 1 to 9, 361 families with income ranging from Rs. 10-15 and just 14 families with income above Rs. 16. It is left to the imagination of the reader to draw his conclusions as to how these people must be spending their income on different heads of expenditure.

During war years the working class cost of living index went up by more than 200%, other commodities recording a similar rise or a little less. Even today instead of coming down it has gone up appreciably. No wonder if these families have starved or are still starving. We shall see that when we consider nutrition.

Poverty Line:

Judging from the records of the Parsi Panchayet nearly 40% of the Parsis living in Bombay have some day been in some want somewhere. We have above dealt with a population much smaller than that, viz., 7.5% of the total population. We have arbitrarily put the poverty line at the level of Rs. 15 per head. If we put it above to conform to the English standard it should engulf a much larger population. Booth divides his population into 7 classes—A to H. A to D fall below the poverty line and E to H above it. A is the 'lowest' class composed of occasional labourers, loafers and semi-criminals; B is the 'very poor' class composed of casual labourer, of the people who live from hand-to-mouth and who are in chronic want; C and D comprise the bulk of the 'poor' with irregular employment, underemployment and insufficient earnings. Class A has a percentage composition of 0.9, B 7.5 and C and D 22.3. The Parsi class of 'very poor' has also a composition of 7.5% as stated above but it consists of casual workers and underpaid, underemployed and irregular workers. **If the Parsis can tackle the problem of the casual and irregular worker and of the underemployed, much of the burden on charities can be alleviated. It is not merely an economic question. Back of it is the problem of sub-health, a malaise peculiar to all communities with a low nutritional standard.**

Nutrition:

There is no study which embraces the question of nutrition standard of the whole Parsi community but there are data available of a limited nature with regard to the poor of the community. For optimal conditions of health proximal principles of food are as much necessary for the rich as for the poor. However, for the poor it is not only the question of an ill-balanced diet. It is also the question of an inadequate diet. One's appetite has the surprising ability of adapting itself to the limitations set by the economic condition in which he lives and as the time wears on the person gets used to the diet, however inadequate it may be, with consequent ill-health which in the long run proves very costly.

In a study of 50 poor Parsi families in 1941 Miss Desai (23) found that none was well-fed, one was adequately fed, one was poorly fed, seven were ill-fed and the rest, viz. 41, had severe malnutrition. Nutritional standard was based on calories without any regard to other factors:—

Severe malnutrition	1,500 and below
Ill-fed	1,500—1,800
Poorly fed	1,800—2,300
Adequately fed	2,300—2,800
Well fed	2,800 and above

The analysis shows that 98% of the poor families were living in a condition which is a disgrace to an enlightened community. By food items 94% were found to be deficient in milk, 52% in vegetable protein, 58% in cereals, 86% in leafy vegetables, 74% in non-leafy vegetables and 100% in fruits. However, 92% of the families consumed animal protein, 90% fats, 78% sugar and 82% tubers in an average form. 6% of the families used animal protein in excess, 22% sugar in excess and 2% tubers in excess.

As regards income 30% of the families had income varying from Rs. 0-50, 48% from Rs. 51-75 and 22% from Rs. 76 upwards. Reducing the income to income per man-value Miss Desai found that 66% of the families had income below Rs. 15 while only 10% reported above Rs. 20. Taking the expense on food per man-value it was found that 26% of the families spent between Rs. 4 and 6.9, 42% between Rs. 7 and 9.9 and 26% between Rs. 10 and Rs. 12.9. Only a small percentage spent more than Rs. 13 per man-value.

Miss Desai's inquiry was undertaken in the latter half of 1941 and was completed before commodity prices began to go up on account of the war. It conclusively proves one thing, that **even before the war poor families passed through a severe strain of malnutrition and that after spending on food there was very little left for other essential items and for maintaining a certain human standard of life.**

In a study of native White and Negro population of East South Central Cities (U.S.A.) Williams (95) bemoaned that '69 per cent of the White families and 74% of the Negro families in the group covered spent less than $2.50 a week per person for food,' the minimum necessary per capita per week on food being $2.50. Britain spent 9s. per week per person before the war (Orr, 70). Rendered into Indian currency at the prewar rate we should require Rs. 30 per month for food only. The bulk of the Parsi poor cannot reach even half that figure.

Poor families in Bombay spend 30 to 40% and even more of their income on rent. This circumscribes their spending power for other necessaries like food, clothing, medical care, education, etc. America spends twice as much on food as on any other item including luxuries, (Osborn, 71) (Table LIII).

TABLE LIII.

Family Budget in U.S.A.

Item of Expenditure	Percentage
Food	33.6
Housing	17.9
Household operation	11.7
Clothing	10.1
Automobile	8.2
Medical care	4.6
Furnishings	3.4
Recreation	2.9
All other	7.6
	100.0

However the increase in number of children is a telling factor. Lorimer and Roback (59) give standardised values per meal per equivalent adult from the Federal Study of Consumer Purchases from sample populations of Chicago, Middle Cities and Pennsylvannia—Ohio Farms (Table LIV).

TABLE LIV.

Standardised Values per Meal per Equivalent Adult from Sample Populations (U.S.A.).

	Couple without children $	Couple with 1 child $	Couple with 2 children $	Couple with 3 or 4 children $
Chicago	.238	.200	.170	.144
Mid. Cities	.183	.148	.124	.103
Pa - Ohio Farms ..	.138	.122	.105	.092

Rendered into Indian currency we find that the standardised meal value ranges from 11.4 to 4.4 annas depending on the composition of the family. A comparison with Miss Desai's data on the subject provides us an eye-opening result (Table LV).

TABLE LV.

Standardised Values per Meal per Equivalent Adult (Parsis).

Family with 1 child as.	Family with 2 children as.	Family with 3 children as.	Family with 4 children and over as.	Mixed Family with children as.
3.58	2.71	2.43	2.01	2.4

It needs no comment. The figures tell their own tale of poverty and semi-starvation.

But it is impossible for the poor to go below a certain bottom limit. In order to keep above that level or flush with it the poor must borrow and run into debts, small and big.

Out of her 50 families Miss Desai found 30 families in debt ranging from Rs. 50 to 4,000. 15 families disclosed a debt up to Rs. 200 each, 8 families up to Rs. 500, 5 families up to Rs. 1,000 and 2 from Rs. 3,000—4,000. Apparently the families with debts of Rs. 1,000 and above must have created them for reasons other than economic, mostly medical expenses and perhaps thriftlessness in marriage, death and such other ceremonials. But the debts are there.

We are tempted, nay spurred, to ask a question. **In this welter of economic and social chaos what happens to the children?** We again fall back upon Miss Desai's data. She has shown pro rata food-values of children by age-groups (Table LVI).

TABLE LVI.

Pro Rata Food-Value per Child by Age-group as Compared with the Man-Value Pertaining to that Group.

	Child under 4	Boy 4–6 Girl 4–7	Boy 7–8 Girl 8–10	Boy 9–10 Girl 11–12	Boy 11–12 Girl over 13	Boy 13–15
Pro Rata Food–Value	0.139	0.25	0.27	0.32	0.35	0.42
Man–Value	0.5	0.6	0.7	0.9	0.9	1.0
Difference	0.361	0.35	0.43	0.58	0.55	0.58
Deficiency Percentage	72	60	61	64	61	58

Highest deficiency percentage can be noticed amongst the pre-school age children below 4. Even by the time the child becomes an adult the deficiency percentage has hardly lessened by 15% and the deficiency level remains round about 60%. No tale could be more sordid than this and that was before the war accentuated difficulties.

As a result of the World War I a large number of European children suffered from diseases and deformities. So says the report published by the League of Nations in 1933.

World War II was a war of all attrition and little contrition. So it has ended in no nutrition. The western countries learnt nothing by the first war. Children all over Europe have been the worst sufferers. Perhaps we went to win the peace at a terrific cost. We shall patiently await the report of the United Nations Organisation on the physical and mental stage of children in occupied countries. There was no war on the Indian soil except a few skirmishes on the Indo-Burma frontier. Yet the global nature of the war was sufficient to encompass even a large sub-continent like India. Famines raged galore in some of the provinces and people died like flies. Most of the country lived on the verge of starvation except for a few fortunate cities like Bombay. And even in Bombay people with small earnings suffered the most on account of extraordinary rise in prices of articles of daily use.

In order to study how far the Parsi poor were affected the writer issued a questionnaire to recipients of relief from the Parsi Panchayet. Families were taken at random. 105 blanks were filled and returned, out of which 2 were rejected and 103 utilised. Most of these people were interviewed and further particulars taken or certain others checked. We arrived at the following result:—

83 families reported that the rationed quota was sufficient, 12 said it was more than sufficient and 8 said it was insufficient. However, only 39% bought full quota and 61% part quota. Nearly 55% of the former and 60% of the latter created debts for want of ready cash to buy rationed articles. 35% were creating debts up to Rs. 10 p.m., 12% up to Rs. 15 p.m., 34% up to Rs. 20 p.m. and about 19% up to Rs. 30 p.m. or more. Only seven families were found to be prepared for emergencies and had stocks to last for a few weeks. The rest would have starved had an emergency arisen. 18 families were found to live on tea and bread and 8 on bread and pulses. 19 families reported curtailment of food and even compulsory fasting on certain days. 31 families reported definite under-nourishment of children. Nearly 40% did not buy sufficient vegetables. As regards milk about 7% bought 32 ozs. a day, 10% 24 ozs., 23% 16 ozs., 37% 8 ozs., 18% 4 ozs. and about

5% no milk. On a rough estimate it can be concluded that more than 50% of the families had to subsist on an inadequate diet.

A referendum was made to 40 Parsi doctors out of whom 18 replied exhaustively. One of them, an eminent tuberculosis specialist, stated that the main trouble was from deficiency diseases, due to deficiency of vitamins and proteins in the food consumed by the poor, lowering "general resistance to all infections particularly of the respiratory tract (bronchitis, pneumonias, virus infections, influenza, tuberculosis, etc.). In children the effect on physical and mental development would form a grave problem in coming years. This would include infant mortality, developmental diseases, proneness to infections, poor physical and mental development and consequent ill-equipment for the much more strenuous race of life which is to come. *The diet of the poor must be properly adjusted.* There should be more animal and fatty diet for children and milk of better quality. The question of air and light must be met equally energetically as foodstuffs. Prevention is most vital and cheaper in the long run. 'Curative' is a misnomer. It ought to be really termed patching up. *In normal times the poor did not take adequate food and at present the intake is definitely lower.*" (Our italics).

The above is a sane view and no exaggeration. Almost every doctor has said the same thing. Practically all agree that in normal times even the food intake of the poor was nearly 50% inadequate and the war had accentuated the problem. Everyone laid stress on children and their needs. Some of the diseases listed by doctors suggest a veritable emporium. Some of them are: anaemias, general debility, phthisis (pulmonary), skin diseases, eruptions, oedemas, kidney troubles, malaria, diarrhoea, diphtheria, pellagra, neuritis, avitaminosis, marasmus, etc. etc.

We have no direct data to prove that more of the poor were carried away by hand of death than the rich due to deficiency diseases during the acute period of war. For the dead bodies consigned to the Towers of Silence the Trustees of the Parsi Panchayet charge a certain sum. For those who cannot afford full fee, a special 'poor' charge is made, which is nearly ¼th of the original. We would refer the reader to the rising number of such cases shown in Table LVII. It may be that the rise of cases paying 'poor' charges has been entirely due to economic distress. But it may as well be argued that a larger toll is being taken from those who are in the lower economic status. However the fact that the total number of deaths has not appreciably increased would go to show that the economic distress is more responsible than deficiency diseases in that class of people.

TABLE LVII.

Total number of deaths — 1927-46 — showing number of persons paying full and special 'poor' charges at the Towers of Silence.

Year	Males	Females	Total	Paying Full Charges	Paying Special 'poor' Charges
1927	523	482	1005	790	215
1928	520	432	952	724	228
1929	519	493	1012	747	265
1930	532	421	953	696	257
1931	515	448	963	653	310
1932	438	388	826	547	279
1933	445	399	844	554	290
1934	493	469	962	582	380
1935	503	460	963	605	358
1936	491	433	924	540	384
1937	533	431	964	561	403
1938	578	436	1014	576	438
1939	511	410	921	521	400
1940	489	452	941	548	393
1941	500	423	923	576	347
1942	462	405	867	580	287
1943	566	446	1012	680	332
1944	504	491	995	673	322
1945	550	447	997	689	308
1946	517	465	982	668	314

Deficiency Diseases:

A deficiency disease is normally attributed to the dificiency of some constituent in the diet or to some vitamin deficiency. Bacharach (4) goes to the length of describing 'any sick condition due to the absence of or shortage of dietary constituents' as a deficiency disease. Critics usually talk of laziness of the poor to do this and that and many other things to improve their lot. But the most vital point is lost sight of entirely that a man is made of what he eats and is capable of traslating only that much energy which he produces through food intake. If he exerts more the machine is overstrained and after a certain limit the strain produces a drowsy, lazy feeling. Shortage of breath is a complaint often made by women who come to charity offices for help. This is not a symptom of laziness but of a disease—beri-beri—due to deficiency of vitamin B_1. Paralysis and dropsy are also symptoms of beri-beri and these diseases are not uncommon amongst the poor. Consumption of highly polished rice is at the bottom. Sometimes quite a good few complain of pain in joints, bear sallow complexion, have bad teeth and fragile bones. This is associated with scurvy, the result of lack of vitamin C brought on by diminished or no intake of fruits and vegetables. How many of us realise that rickets amongst our children is a more common disease than we suppose. The Parsi Panchayet started a Nursery School for the poor of the Fort area in 1942 and soon after its inception the medical adviser got to work. She found that almost every fourth child suffered from rickets. It may not end in a fatality but the disease leaves its lasting marks even in adult life if not cared for in childhood and results in diminished vitality, less work, less earnings and finally dependence on charity.

Optimal Diet:

What is an optimal diet and can we suggest it for the poor on a scale which they can afford from their scanty earnings? There are varied opinions as to what constitutes an optimal diet. Take, for instance, protein. The Bureau of Home Economics (Williams, 95) says that 67 grams of protein are necessary for a good diet, Bacharach (4) suggests 120 grams for an optimal diet and Mac Carrison (62) gives 90 to 100 grams for an optimal 'Punjabi' diet. Opinions may as well differ on the proximal intake of other essentials. Without entering into the hair-splitting details of dietetic eccentricities we can confidently lay out a fair menu for the poor. In fcat Miss Desai (23) did draw up one keeping in mind the earning mode at Rs. 7 to 9.9 per head but that was before the prices went up. Today we cannot draw up a menu for less than Rs. 15-20. And that raises the question for the bulk of the poor. In 1941 the writer had mooted the idea of training housewives in 'balanced diets' and although it fizzled out the want remains. We have imbibed a few war time dietary habits, for instance, the unmilled rice and the whole wheat bread. Roughly 2½ lbs. of the latter contain all the iron content, namely 15 milligrams, which an adult may require in a day and the former gives us ample B_1 vitamin. If a propaganda is carried on to stick to habits acquired during the war there will be much to gain.

Care of Children:

Take care of the child now and the community will take care of itself in future. That is the maxim which every civilised community knows. Do Parsis take care of their children today as they ought to? There are roughly 15,000 children below the age of 15 in Bombay. Of these nearly 4,000 are in the distress group. Taking it for granted that the other 11,000 are being cared for by their parents, let us see how these 4,000 children are being fed. In 1943 the writer got details of children studying in charity and semi-charity schools. It was found that out of a total of 3,736 children studying in 12 schools, 2,609 were getting midday meals (Table LVIII) and 1910 fresh milk, Klim powder or porridge. It may be stated that some needy children were being given midday meals as well as porridge or milk. It would appear from this that a large number of children are being fed by schools. This is the result of an awakening in the community and much personal interest in the welfare of the children by the school authorities. **But a recent survey of two principal schools has shown a marked deficiency of diet and health.**

It is a matter of knowledge that all the poor children do not attend charity schools and all those that attend charity schools are not necessarily poor. Inquiries made from other

TABLE LVIII.

Nutrition Data of Parsi Children Studying in Charity and Semi-Charity Schools—1943.

NAME OF SCHOOL	Children of the age of 10 and below		Children between 10 and 14		Total (5—14)		Children above 14		Grand Total	Children given midday meals	Children given milk or porridge
	B	G	B	G	B	G	B	G			
1. Bai Ratanbai Pavri School	—	25	—	75	—	100	—	125	225	125	—
2. Jijibhoy Dadabhoy School	73	56	47	44	120	100	34	20	274	250	20
3. Bengali School	—	89	—	48	—	137	—	74	211	100	100
4. Gamadia School	—	154	—	157	—	311	—	123	434	100	190
5. Byramjee Jejeebhoy School	53	—	259	—	312	—	170	—	482	407	400
6. Readymoney School	94	118	4	45	98	163	—	6	267	267	267
7. Panday School	69	162	—	158	69	320	—	87	476	440	250
8. Sir J. J. School (Girls—Fort)	29	98	—	197	29	295	—	138	462	324	313 Butter milk
9. Sir J. J. School (Dhobitalao–Girls)	—	65	—	39	—	104	—	3	107	46	80
10. Sir J. J. School (Parel)	45	65	1	47	46	112	—	—	158	61	—
11. Sir J. J. School (Boys—Fort)	97	—	341	—	438	—	121	—	559	460	250 Klim powder
12. Sir J. J. School (Dhobitalao–Boys)	63	—	13	—	81	—	—	—	81	29	40 Klim powder
Total ..	528	832	665	810	1193	1642	325	576	3736	2609	1910

B=Boys; G=Girls.

schools showed that there were 2,000 children, of whom nearly 1,200 were boys, studying in 19 cosmopolitan schools. Their fees ranged from Re. 1 to Rs. 25 p.m. Nearly 60% paid full fees, 47.5% part fees and 2.5% no fees. It may be stated that roughly 25% or about 500 children from the 'poor' income group may have found their way in, fees being paid by charity funds.

Thus we can see that a bulk of the poor children go to charity and semi-charity schools. Their deficient diet at school must improve when the normal times return. However useful the feeding of children in the schools may be it is done just once in the day and the child returning to an ill-nourished family must share its ill-nourishment. Parents tell us that children return home hungry from the school and they have no wherewithal to satisfy their hunger. They just eat what is cooked in the night with the rest and go to school the next day with little in their stomach. Early morning and afternoon snacks would provide additional nutrition to the children and the schools will be doing distinct good if they undertook to do so. This does not solve the problem of the pre-school age child who rots at home. The only panacea is **nursery schools in as many poor localities as possible.** Any amount of money spent in this direction will repay itself many fold in future.

We have only two children's clinics amidst us. In the peak period in 1940 these clinics supplied milk to 441 children at an expense of Rs. 62 per day. Paucity of funds obliged the owners, who are all charity funds, to reduce the number to 157 in 1943 spending Rs. 51 per day. While the number of children fell by nearly 2|3rds the expense was affected to the extent of 1|6th only. This was done by the clinics at a time when the children needed milk the most. The community should not stint money on constructive work. Let no effort be spared for the uplift of children.

Factors at the bottom:

When we talk of so much misery amidst seeming plenty in Bombay we pause to inquire what is wrong with the community. A community that was once supposed to be the most affluent, a community that once boasted of no cases of beggary and social vice seems to have come to a pass that is deplorable. In less than 50 years the class that was on top has gone down into the morass of misery and poverty. In the first decade of this century the Parsi Panchayet received 183 fresh applications for relief, of whom 139 were from widows, 34 from couples, 7 from widowers and 3 from deserted women. If the reader glances at Table XLVI he will easily realise the change which we may aptly call disastrous. A class that should economically try to remain on its legs has now increased considerably. We are talking of couples with children. With the increase in number of applicants has also come the variety of help asked for. Some three-score and ten funds spend between them Rs. 12 to 15 lakhs a year. Is all this money gainfully employed and what moral and material help does it render to the recipients. We shall discuss these questions later (Chap. VIII) but before we do so let us trace a few major causes that are at the bottom and are primarily responsible for causing so much poverty and destitution in Bombay and for throwing a large number of families on charity. They are:—

(a) Failure to meet all social and economic demand of a family within the total earned income.
(b) Failure to provide for a future contingency by way of assurance, saving, etc.
(c) Failure to accommodate standard of living within the total earned income where the upper limit is circumscribable without any serious difficulty.
(d) Failure to discharge social obligations properly, for instance those of husband to wife, son to father or mother, affluent person to indigent relatives, etc. and vice versa.

Almost all the cases of charity relief fall under one or more of these causes. Those with low income and large families fall under the first category. Those who lose bread winners all of a sudden and find themselves wihtout any source of income come under the second category. Those who live beyond their means and fail to lay by even a small amount for the rainy day fall under the third category. All cases of destitution and of dereliction of social duty, wilful or otherwise, fall under the last category.

CHAPTER VI.

THE HERITAGE THAT IS PARSI.

Old Iranian Culture:

It is from thousands of tons of pitch-blende that a few ounces of a very precious element called radium emerges. Its value, significance and potency are million times more than what disappears in the melting pot. The emergence of a highly endowed race can be to some extent likened to such a process. Whether to apply to the modern Parsi such a high sounding flattery or not is a matter of taste. If we put up a family tree with the modern Parsi at the base, his feet firmly rooted on the Indian soil 20 centuries after Christ, we will find the top of the tree running skyward disappearing into oeons of time measured by some 30 centuries before Christ, in terms of history which though not fragmentary, is sorely lacking in its exactitude. Historian puts down roughly 5,000 years. According to Bundehishn, the Book of Creation, the Adam and Eve of the Parsi lore were Mashya and Mashyoi somewhere in the dim past. Gayomaretana of the Avesta, simply known as Gayomard, was the first of the line of Pishdadian kings. Fire, agriculture and some arts originated under these kings. Primitive hunting and pastoral life had become past history. Pishdadian man had settled down in agricultural pursuit. He is supposed to have made iron implements and even precious stones (Dhalla, 25).

One of the kings, Yima of the Avesta, popularly known as Jamshed, was obliged three times to migrate to different places with his flock of men and animals presumably on account of rising prosperity and abundance of mankind. At one time there was, however, a deluge and he was obliged to shift like the biblical parallel personage Noah. Airyana Vaejah, or Iran of those days, had a climate with 'ten months of winter and two of summer.' We may presume the deluge to be a part of the geological phenomena which were perhaps common during the fourth glaciation. Neanderthal man had already arisen when the fourth glacial period had begun. Genus Homo sapiens, the modern man, had begun to appear somewhere with the Aurignacian culture in the Upper Palaeolithic times. This culture may be regarded twenty to forty thousand years old. We cannot casily locate the Pishdadian dynasty on the time scale. Surely it could not be 40,000 years old, not even twenty, perhaps ten, perhaps less than ten. If we identify some contemporary arts and crafts of the people and try to fit them on the time scale we may come to some rough conclusions regarding the probable period of the original forebears of the modern Parsis.

Man's hunting and otherwise hazardous life made him look for more stable foods for sustenance, and pastoral life took its birth. Planting of corn for food came to be known somewhere between 5,000 and 4,000 B.C. Its origin is not known but it may have originated somewhere in Egypt or in Western Asia (Huxley et al, 45). Man's first abode is supposed to be Western Asia rather southerly and Haddon (38b) agrees with this opinion of Giuffrida-Ruggeri. It is surmised that at that time ideal climatological conditions prevailed in Eastern and Central Iran. This was the home of the originators of the early Iranians (Geiger, 34).

According to Christensen (13) the Yashts of the early Mazdayasnians proclaimed a culture of warlike aristocracy of Aryan knighthood, while the Gathas, which were composed by the Holy Prophet Zoroaster himself and which came later, laid stress on agrarian life and civilisation. It was a culture predominantly of small agrarian states and advocated a much simpler mode of life. The Gathas and the old Yashts are unique monuments of old Aryan thought and feeling. The age of Zoroaster himself is an intriguing point, Parsi scholars putting the date anywhere between 3,000 and 10,000 years and Western scholars like Jackson (46) and Christensen (13), narrowing the inquiry down to the millenium before Christ. The Vendidad, a holy book of the Parsis, codifying health and sanitary principles written after Zoroaster, is considered more than 3,000 years old. Christensen believes it was written somewhere in the early centuries of the Arsacideae, that is, a few centuries before Christ. We are not inclined to put the age of Zoroaster between 4,000 and 5,000 B.C. for obvious reasons that farming and animal husbandry in the time of

Zoroaster was a **fait accompli** at least with the settled population and Zoroaster extolled it. The Iranians in his time not only grew corn but also raised flocks of draft and milch animals like cow, ox, sheep, horse and camel. In the long line of Zoroaster's ancestry there have been names with a suffix—aspa, meaning horse. They may be horse-breeders, and this could not have been a regular profession with man some 5,000 or 7,000 years ago. According to Jackson, Zoroaster died in 583 B.C. at the age of 77. Thus he must have been born in 650 B.C. Christensen believes he lived between 650 and 600 B.C. and draws his points of belief from the fact that Kai Vishtasp or Kavi Vishtasp who accepted Zoroastrianism was a later potentate and not a Kianian king as supposed by the Parsis. However Dhalla puts Zoroaster's appearance in the Kianian dynasty which began its rule about 2,000 B.C. According to this authority between 708 and 558 B.C. the Medes ruled over Iran. This would put down Zoroaster's age in Median times. But Christensen puts down 835 as the date for the first appearance of Medes according to Assyrian reports, and 705-675 as the period when the Achaemenian dynasty was founded. Dhalla puts the latter date at 558 B.C. until its fall in 330 B.C. at the hands of Alexander. Jackson is not sure of Zoroaster's date but Christensen writes with more sanguinity. Amidst such a plethora of conflicting data we may safely assume a middle course or broadly suggest that Zoroaster lived anywhere between 1500 and 500 B.C. We may however be inclined to put the date more towards 1500 than towards 500 for certain very valid reasons. As we have noticed above in Pishdadian times there was not only primitive agriculture and animal husbandry but also certain arts and industry. After the Pishdadians came a long line of Kianian kings who seem to have ruled between 2000 and 700 B.C. Now the Gathas, the sacred Hymns of Zoroaster, sing praises of agricultural life. There is very little mention of arts and industry. Had he been born at the latter end of the Kianian dynasty his outlook on life would have been different. It would surely have been affected by the rising importance of art and industry. But it was not so in spite of the fact that the Pishdadians knew weaving and writing and even made iron implements. Unless these things were in their infancy they could not but have left sufficient mark on the young philosophic mind and because they failed to do so we can safely assume that they were only in the formative stage. Zoroaster could not have been the precursor of a Gandhian philosophy in the dim past obviously swinging from art and industry to a simpler mode of life like the Charkha. The only apparent reason was that man still looked upon agriculture as his staple prop for existence and hence our predilection for the earlier date, 1500 B.C.

Although the age of Zoroaster does not concern us here we have attempted to go into it because of its antiquity. It brings us over to the old Iranian civilisation. Azi Dahaka, Zohaka of the Shah Nameh, a semitic prince had robbed Pishdadian King Jamshed of his reign and his descendants are supposed to have ruled over Iran for a thousand years. Thraetaona, or Faredun, overthrew this foreign yoke and brought the realm back to the Pishdadians. The Kianian dynasty started somewhere about 2000 B.C. Add to these 1000 years of Semitic rule and some more for the Pishdadian rule after the former was overthrown. And also the years of pre-Semitic Pishdadian rule. We come to years between 3000 and 4000 B.C., which could be the date when the Pishdadians ruled in Iran, perhaps even prior to 4000 B.C. Then perhaps these were the people who gave agronomics and their later descendants animal husbandry to the world. We admit the superior civilisation of Egypt but we cannot say with certainty if agronomics started with the Egyptians or with the Iranians. Even in metallurgy we do not know to whom to give the credit. Dhalla has attributed iron implements to one of the Pishdadian kings but Geiger (34) says that the Avestan age knew nothing of the glass and iron manufacture, although they knew of gold, silver, brass, copper, stone, clay and wood.* Even they did not know, according to him, the use of salt just like the people of the Rig-Vedan Era. Much is made of copper found in Egyptian tombs belonging to eras earlier than the Predynastic period ending before 3000 B.C. According to Lucretius (60, cited Haddon, 38a) copper came in use before iron. The Iranians have been credited with the use of the same about the same time or even earlier. However, with the conflict in dates we cannot say with certainty as to which civilisation influenced the other in agriculture and metallurgy and even glyptics.

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* Vendidad, VII, 73-75.

The later dynasties that ruled over Iran—the Kianian, the Achaemenian, the Median, and the Sassanian, not mentioning the foreign dynasty, the Parthian, which came from near the Caspian Sea and had little in common with the ethnological element of the Zoroastrian kings—all have been noted to have carried forward the primitive culture of the Ancient Iranians. Even the Parthians, who emerged to drive out the Greeks and the Macedonians resident in Iran for a hundred years after the defeat of the Zoroastrian kingdom by Alexander, assimilated and absorbed the Zoroastrian culture instead of foisting theirs on the vanquished people, usually a rare occurrence in history and testifying to the greatness of the last Achamenian glory. A similar ancient parallel can be found in Egyptian culture, the oldest of its kind in the world, when the Hyksos, the shepherd kings, had established their rule over Egypt for full 500 years (2233-1700 B.C.). Ere this for more than 2000 years the Egyptian culture had waxed high. A sudden wave of nomad tribes of Syria carried away before their virile onslaught the people and interrupted the great ancient Empire of Egypt. Their march was swift and sudden. It was facilitated by the mixture of races that lived on the borders of Egypt, the Nubians and Ethiopians, the Cushites, the Soudanese, the Libyans, the Semites, the Phoenicians and so on. The virile race of the Semites of Syria established an empire with their metropolis at Memphis. But they soon got themselves assimilated into the Egyptian culture. It was perhaps too much for them to stand it. They adopted not only Egyptian customs but also forms of worship and government.* Nearly 2000 years later history repeated itself in Persia. The Parthians emulated 'Persian art and architecture, institutions and customs.' They adopted Iranian names and deities. The priestly class of Iran was a favourite class in the government of the country. There was no bar to government by the Zoroastrians according to their own laws and customs. In several parts there was complete autonomy as long as the Persian Prince paid a tribute and fought wars on the side of the Parthian overlord, until at last the house of Sassan put an end to the foreign yoke in third century after Christ and Zoroastrian Empire came back into its own (Dhalla, 25).

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* A Guide to the Exhibition Galleries of the British Museum (Bloomsbury) Eleventh Edition. Revised,

Throughout Zoroastrian influence has been all pervasive. From agriculture in the primitive times down to establishment of places of learning, universities, etc., Zoroastrianism in its varied form has been the main theme. Art and architecture portray Ahura Mazda, the Creator, or His variation in Athra, Fire, the son of Ahura Mazda, the symbol of Zoroastrian worship. One can live through Zoroastrianism and its ideals by visualising the famous rock-cut inscriptions and writings, bas-reliefs and etchings, scenes and configurations without reference to scriptures. Behistun or Bisitun carvings, Naksh-i-Rustom, Naksh-i-Rajab, Takht-i-Taus, Takt-i-Suleman, Tak-i-Bostan, ruins of Persepolis and Istakhr, the inscribed column of Cyrus the Great, the plates of Darius Hystaspes, are but a few glimpses of a past civilisation that lay buried for ages till resuscitated by the shovel of the archaeologist and the pen of the philologist. Avesta praised agriculture as the first art of mankind in praise of God and in furtherance of itself. As the mighty empires grew and as their knowledge widened the Iranians fell into arts and crafts, until finally we come across application of finer faculties of mind to fine arts and learning in later times. Jund-i Shapur, a university of high renown, sprang up in Sassanian times. Temples and places of worship, now under ruin, dedicated to various deities still dot a number of places in Iran. Ravages of time and human vandalism have left their scars but the history has been traceable.

Bigotry may have existed amongst the masses and lesser satrapies but the imperial sovereigns always showed religious tolerance towards other faiths. At one time there existed a treaty between Imperial Iran and the Byzantine Court to respect each other's religion (Wells, 93). The triad after the semitic pattern with Mithra and Anahita on each side of Ahura Mazda sprang up in Iran. Zoroastrianism denounced idolatry and iconolatry but mystified deities held a soft corner in the bosoms of masses. Artaxerxes II raised statues to Anahita in Babylonia, Susa and Ecbatana thus glorifying devotion to duty and humility, while Mithraism permeated many a neighbouring country. The inscriptions of Cyrus and of Darius speak of some 29 peoples and even more under domination. From this fusion of local and foreign elements emerged a distinct Iranian culture in Achaemenian times. This distinct emergent culture was destined to prove a potential influence on the near and middle east countries. India assimilated this culture and Buddhism imitated Iranian art (Christensen, 13).

In the time of Maurias Persian architects built the palace at Pataliputra. Some 'Kushan' kings* struck coins with Iranian and Indian deities. Khareghat (52) in an unpublished paper gives a learned thesis on the word **'Ardochsho'** on Kushan coins. Iranian art and architecture has always displayed a distinct local culture although the materials may have been imported from elsewhere. Christensen sees three distinct stages in Pasargadae as the youthful art, Bisitun following next with Persepolis portraying maturity. Statues, statuettes, manheaded bull, pitchers, vessels, vases with fantastic figures, ornaments, etc., are but a few representatives of a foregone civilisation.

As stated above Zoroastrian influence was all pervasive. Even after the fall of Yezdegard the Zoroastrian spiritual fire kept burning with the glory of the valiant Ispahabads of Tabaristan (Unvala, 91). It has affected great religions and cults like Judaism, Mithraism, Jewish doctrine, Christianity, Manichaesm and Islam. At a later stage Zoroastrianism became subject to syncretism and with a few incrustations here and there has been still practised by the Parsis of India and the Zarathushtrians of Iran in its essence.

Typical Parsi Characteristics:

Zoroastrian teaching enjoins a life of struggle, idleness being very strongly deprecated. As such it extols cheerfulness under all circumstances. The Iranians from early times down to the Sassanians were a cheerful race. The same trait is to be found even today among the Parsis of India 1300 years after Iran went into antiquity. The ceaseless struggle enjoined by the dual ethical concept of good and evil, of light and darkness, of Ahura Mazda and Ahriman, is enough to inculcate a spirit of dauntless courage, diligence, faithfulness, justness, tolerance, straightforwardness, generosity, etc. Most of these fine traits are to be found in the Parsis of today. Together with these good traits they have also inherited from their great ancestors some of their bad traits, traits that cost them a kingdom.

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* Kanishka, Huvishka & Vasudeva, see E. Herzfeld, Paikuli, 1924.

The valorous Iranian sword carried death and subjection into the hearts of many a kingdom. The plundered riches and the ease with which other wares of daily use and luxury could be obtained from vassal subjects made the fighter clan dependent for its existence on dependent countries. This legacy of luxury and wanton prodigalism, starting with the Median kings and running through the Sassanideae, has been preserved in the modern Parsi. Achaemenideae was not a lesser civilisation and it was in contact with no less than six great civilisations, Egypt and Greece included. Herodotus however says they aped the customs of contact civilisations. Although this give-and-take of customs is always present in all times and climes, Parsis of India have not been slow in exhibiting this tendency. Some of their customs, mostly social, are an eloquent testimony. Achaemenians were noted for their gaiety, amiability, hospitality, boisterousness and, above all, industry. Their energy was boundless. They pulsated with vigorous life, but they were subject to moods. Restless like a pendulum, they swung from side to side and within their oscillating amplitudes were subject to sudden bursts of hilarity and calmer aftermaths. They would ride rough on the crest of a tidal wave of passion in a broad, bright, gay spirit and then fall into the trough of despondency the next minute. Today this trait even after more than 2000 years characterises the modern Parsi. From mere apelike imitation to true and valuable contribution to the storehouse of knowledge, art and industry, the ancient Iranian and the modern Parsi have undoubtedly subscribed. Between mere apism and genius there lies a great gulf, bridged by a number of those we call average. Most Parsis fill that gap admirably well. The period of renaissance which started with the House of Sassan was shortlived. During an eventful career of some four centuries and more the Sassanians passed through a gamut of good and bad times. With legitimate pride they traced their ancestry to the great Achaemenian dynasty just as the modern Parsi traces himself to the Sassanian dynasty. But this was no mere flight of fancy. It was a physical continuity in different social surroundings almost bordering on modernity. It had brought with itself the good and bad traits too of the Achaemenians. Christianity had come to stay and was fostered by the impartial and helpful attitude of the kings. Life of ease and luxury was an order of the day, though fine pieces of architecture came into being. However, after Khushru Parviz (Chosroes II), 'manhood decayed' and men became 'effeminate' (Dhalla, 25). Sporting yet flippant, adaptive and assimilative yet imitative, composed and self-reliant yet impulsive Sassanians handed down this legacy to the Parsi of today. Dhalla in his criticism is unsparing of the traits which modern Parsis display but he may be too uncharitable when he says they have no genius. While winding up his lucid exposition he writes: "Modern Parsis are enterprising and practical, virile and industrious, generous and benevolent. They are impusive, not given to reflection, emotional and not intellectual. They are neither philosophical, nor rich in imagination. Talented as they are, they are not endowed with genius." Many writers have suggested that internal dissensions were the *causa causans* that rent asunder the Persian Empire and Dhalla deplores a similar tendency amongst the present day Parsis. Let them beware.

Iranian concept of Society and the Living Present:

Iranian society has passed through a myriad phases, the dominant keynote being always the family. Ahura Mazda praises a man with many children and deprecates celibacy. Continuity of heritage played an important role in the life of Avestan man. Marriage got stabilised. From polygamy and polyandry monogamy and monoandry evolved. The patriarchal form of inheritance dates back to the Kianian times. Nmano-paiti, master of the house, is the patriarch. Definite laws were woven round marriage, family, children, adultery, prostitution, abortion, moral turpitude, heinous crimes, crimes against person, property and animals, against sanitation and health, etc., etc. Regulative measures were adopted and codes came into being. **Vendidad,** the code for sanitation and health, came to be written some 3000 years ago. A later compendium **shayast la shayast** is a sort of **addendum sans corrigendum.** Infringement of law was punishable by fines graded according to the degree of the crime. The Zoroastrian conformed to the law or stood punishment meted out to him by Magi, the priestly law-giving class, the intelligentsia of the Iranian society, who held the key to the worldly bliss and to the gates of Heaven.

The Avestan society was by no means a mere aggregation of human beings at haphazard. Their cohesion was perfect and purposeful. Each class fulfilled a purpose. Just as in the Hindu culture, so in the Iranian, we have from the earliest times a class system. In the older Avesta there were three classes. The fourth was added later. Thus sprang the priest, the warrior, the husbandman and the artisan class so well-known in oriental concept. But none was a despised class in the Iranian society. They all worked for the common end, the common weal. Today this classification no more exists, except that the community is divided into priestly and non-priestly classes. Although the cultural history of the community has been filled in from meagre material, the civilisation that bore the culture has left its indelible marks on the sands of time. When Cyrus wrote his famous text on the solid rock he hardly knew he was inserting a link, an Adam's Bridge, between the anterior and posterior lobes of an organism. These artifacts, these implements, these means of preserving a great victory have done what nothing so far could have achieved by way of a social continuity. The monolith of Cyrus at Pasargadae reminds us of a similar monolith of Asoka. While the latter bears edicts, the former is a simple monument of a victory proclaiming in most humble yet eloquent terms the name of a great victor: 'Adam Kurush Khshayathiya Hakhamanishya'—'I am Cyrus, the King, the Achaemenian' (Jackson, 46). These torch-bearers of an ancient culture, strewn as they are over the face of Iran, portray the life and achievements of a nation that has been through so many vicissitudes. A culture that came into definite contact with Egyptian, Assyrian, Babylonian, Greek and Roman civilisations, has been subject to many an ebb and tide of time. It has reoriented, reabsorbed, revolved and resolved itself into a myriad phases before being handed down to us in the form we have. While the culture has been subject to this ebb and flow the civilisation has marched on. At every stage the successor has stood on the shoulders of its predecessor. In every age the people have taken their cue from the people of the past. Emerging from the age of papyrus and rock we have triumphantly moved on to the age of paper and parchment; so from the age of reed and chisel to the age of pen and shovel. While we write history in multiple places with multiple facility, we have begun to unearth the past and rewrite it in our own way. But gone is the civilisation that bore the ancient culture, now lying static in the ruins before us. The civilisation that one now confronts is the one that is the result of a socio-kinetic movement in an unchartered manner on an uncharted sea. The typewriter and the printing press, the loudspeaker and the radio, the flying bomb and the pilotless plane are but the symbols of a civilisation that is energetic, ebullient, fanatic, barbarian. They merely carry the culture on their back, a culture that in itself advances but retards progress, a culture that brings the world nearer to man's hearth and home in one minute, and sends him to his brother's throat in the next. Man has been evaluating his contemporary culture and sticking to what is best in the milieu, throwing away the rotting elements and incrustations. We have not been able to reproduce the Epic Shahnameh or Mahabharata, nor have we been able to reproduce Kalidasa, or Shakespeare or Homer. Instead we seem to be going back to barbarism. The valour that made ancient peoples great no more lives through us. The time has come when we should revise our political ideologies and re-evaluate culture as we understand it.

While Iranian culture held sway over a part of the world, India was developing a sister culture of her own. Without going back upon the times we can draw upon the salient features of these great cultures and shape our thought and action. The Avesta and the Rig-Veda, the Kuran and the Bible have much to teach. The great masters have left for us a storehouse of knowledge which we may replenish in the light of modern civilisation which bridges the past and the present. We need not go back to totemism, to fetishism, to primordial life. However, the present civilisation occupies but a fraction of time compared to the gigantic past that has rolled by. The largest part of man's existence has been a dark chapter. It is only but a fraction of time and a small fraction too that we have seen civilisation. More than half of our time has been taken up by a pastoral and hunting society. It is in the other half that we have advanced. The press and the radio, the engine and the aeroplane are but the inventions of yesterday. While our dim past is little known we have advanced quickly in the shortest space of time. Like an iceberg the major part of our existence has remained below the surface; our known past is what we see above. Human solution must then lie in probing leagues below the surface.

Marxism and Leninism may be today a potent factor in political ideology. Mazdakism, its Iranian counterpart, was a shortlived cult. It was an all-embracing communism that Mazdak advocated, extending to a communism of wives. This was repugnant to Zoroastrian mind which never tolerated promiscuity. A culture which advocated a family life round hearth and home, a culture which admired proud deeds in a long line of patriarchal inheritance, could not for a moment tolerate such a teaching. It nipped the movement in the bud, little knowing that its variation will be developed some day centuries later independently by a different set of people in a different country. Had Mazdakism been properly regulated and developed in a more suitable manner, it would have given a different shape to the political thought of the world in the first millenium after Christ. With the Greek and Roman contact in Sassanian times the ideology would have travelled earlier into Europe hastening the beginning of nation-states that actually came about the 16th or the 17th century. Any how it was the Sassanian culture that made a Mazdak possib and it is the Iranian culture which the Parsis have inherited. But the civilisation they find themselves in is different. The times have moved fast and we are past the stage of living on merely past glories. It is about time the Parsi took to reorientation and reestablishment of new values of life. It is about time he launched on a career, not of hectoring and pettifogging but of sobriety, ingenuity and levelheadedness. His forefathers even lived their life, not mere existence, in spite of a differing civilisation around, as witness the Mede, the pseudo-Persian and the Parthian. An elastic adjustment to changing times is a virtue, not a vice. Within the bounds of one's own cultural inheritance there is enough room for adjustment. The Parsi forefathers managed to make history by emerging once again from the thraldom of a differing civilisation. It may be next to impossible for history to repeat itself now, but fortified with a cultural bias, the modern Parsi can weave a new garment to suit the changing times. He has before him the model of Iranian society that has travelled up steep hills of hard labour, past plains of prosperity and down dales of despondency. That is his own ancestral history. He brings with him a rich lore and a hereditary endowment both precious for posterity. Dictates of destiny have wielded fortunes of man and nation at all times but to a great extent man can fashion out his own destiny from the elements at his command. He can be his own arbiter. All that he requires is the knowledge of elements that form his environment and the art of wielding the implements that form his social armoury. Modern man has with the advance of science a myriad such implements. They must be used wisely.

CHAPTER VII.

FROM RACIAL FICTION TO ETHNIC FACT.

What is a Race:

From time immemorial we have been hearing of raciology, racialism and racial arrogance. Groups of people have oft times ascribed to themselves all sorts of angelic qualities and almost all these arrogant peoples believe in their heavenly descent. Much of this humbug is due to puerile sentimentalism and to political ideologies, the rest due to crass ignorance of the biological concept of a race. The etiology of the word 'race' is rather doubtful. It seems to have been introduced into the European languages by way of the Italian channel from the Arabic word 'Raas' meaning 'chief' or 'head of family.' Webster defines it as 'the continued series of descendants from a parent, who is called the stock.' From the point of view of human biology this definition is merely indicative, not definite. Every human being, no matter where he exists, must possess two parents and not one, as the definition seems to suppose. If we stretch it we would be justified in saying that by the word 'parent' it does not refer to 'parent' as a biological entity which takes part in mere procreation but a human individual who has done something individualistic to establish a lineage. Thus we may talk of Tuttles, Edwardes, Marlboroughs, Bismarcks, Ardeshir Babekans, Dadabhoy Naorojis, Lovji Wadias as the originators of certain lineages but we cannot talk of them as originators of a race. Indeed the biological concept of a race as applied to animal and vegetative kingdoms is different from that applied to human beings. We can speak of a plant race depending upon its seed purity and the smallness of chromosome content and we can speak of an animal race depending upon its intra-specific infertility. The plant kingdom can preserve its purity by vegetative or parthenogenetic propagation but man is incapable of such reproduction. He must have two to make him and those two must each have another two to make them, and so on till infinity or eternity. If Cleopatra married her brother and Cambyses his sister to preserve purity of race, we inquire 'where are their descendants?' Man's 40,000-year old history is much unknown. What the first man was like morphologically, that is externally, we can only leave to our imagination or at best relegate that duty to the anthropologist. He tells us that Homo neanderthalensis was a far different creature from Homo sapiens to which species we have the honour to belong. Darwin ascribed to us the simian ancestry and pricked the bubble of spontaneous genesis of the Zoroastrian and Christian theology and doctrine of man. The anthropologist cannot tell us with exactitude when man divorced himself from the monkey, doffed his prehensile tail and coming down from the tree on terra firma donned an erect posture, styled himself a thinker and became articulate. He may drag us somewhere into the Miocene or the Oligocene period of geological history and in describing some of our earlier ancestors by giving them more fantastic names than they ever dreamed of in their short, drab life. Thus we have Palaeanthropus or Heidelberg man, Pithecanthropus or Java man, Eoanthropus or Piltdown man and Sinanthropus or Peking man. The anthropologist will naively say that none of these hideous fossils was our ancestor for by the time Homo sapiens came to life he had gone to oblivion or was in his last throes of death.

We cannot say with definite certainty whether man took origin in many distinct places with distinct anatomical and morphological peculiarities or in just one place from where he migrated, mutated and settled down in different places with distinct peculiarities. He may be having an original home somewhere in Northern Africa or in South-Central Asia or both but what sort of man — black, brown, yellow, white or red — we do not know.

We come across early human paintings and drawings suggestive of distinctive human peoples or 'races.' The early Egyptians saw four distinct types such as red Egyptian, yellow Semite, black Negro and white Libyan (Haddon, 38 a). The palace of Xerxes, built some 5 centuries before Christ, bears a frieze portraying subject nations bringing tribute to the King (Jackson, 46). Although forms on the printed plate are not distinguishable there are minute variations in figuration in some of them and a few of them have a different mode of approach from others. Thus while some walk, others ride in chariots, on horseback, goats, bullocks, camels, etc. There is an attempt at distinguishing different nationalities. According to Petrie, Turanians are easily identifiable on portraiture figuring in pottery discovered at Memphis on account of their round heads elsewhere carved by Persians on rocks some 3000 B.C. (Haddon 38 a). Petrie recognizes not only Persians and Turanians but also Scythians, Mongols and Indians. Books on numismatics (Unvala, 91; Herzfeld, 42; Parukh, 72) show varying configurations, contours, facial expressions, headgears, manner of wearing beards, etcetera. These are noticeable nationalistic peculiarities which are a definite link in raciology. Although racial classification is much modern, perhaps 30-40 years old, ancestral man was fully observant and portrayed his mental reaction faithfully well. Perhaps Davenport's definition of a race would be considered appropriate and easy of understanding. He defines it as 'a group of individuals constituting a subdivision of the species characterised by the possession of some one distinctive hereditary trait.' (20). Hrdli čka (43) defines it as 'a persistent strain, within any species, of broadly blood-connected individuals, carrying steadily, i.e. hereditarily, more or less of well defined physical characteristics which distinguish them fairly from all other strains or races.'

Aryan Myth:

Racial arrogance derived a very special veneer when Aryan descent was foisted on the Germans by their leaders and their ancestry ennobled in sheer ideal. Had it stopped at that nothing would have mattered but this arrogance became at once aggressive and militant. Persons with a professed or alleged non-Aryan and semitic descent suffered orgies of the worst kind until at last the fired human passions and emotions were caught in a terrible conflagration in September 1939 which lasted for 6 long years involving untold misery to millions over the world.

The word Aryan merely denotes a language affinity. It is perhaps as old as history. The first Iranians called themselves by a name similar to what their Rig-Vedic counterparts called themselves, namely the Aryas. The opposite of Arya was Anarya or Anairiya. The oldest Avesta has reference to these words although its absence in the Gathas is remarkable. Geiger (34) believes that Gathic age was ' a period of the most embittered religious and economic struggles, in which the national element was entirely secondary.' The non-Aryans were mostly those who did not follow a settled life and Avesta calls them by different names like Tura, Danu, Sarima, Sani, Driwika, Hyauna, Mardha, Daha, etc. Rig-Veda assigns names like Dasa, Dasyu, Daitya, etc. That these non-Aryans in both Iran and India were physically, anthropologically or racially different from the refined invaders leaves no doubt in our mind and they were mostly nomadic. However, Geiger believes that 'a considerable part of the Old Iranian nation also followed the same roving manner of life.' He reasons this out from Zarathustra's own preaching, 'I will announce it: Now hear and understand, Ye who have come from near and from far!' This he says presupposes a community of language and the unbelieving audience must have been Iranian only. Anyhow the language affinity denoted by the word 'Aryan' has for long been recognised by scholars as having very little to do with racial affinity. The word travelled from India to Europe in the closing years of the 18th century. Its meaning in the truest sense is 'noble,' 'pure,' 'pious,' etc. (Geiger, 34). It is applied to deities and to noble men. The Greco-Persian names Ariobarzanes and Ariomardos are instances in point. The languages which are covered by the Aryan affinity are Avesta, Pahlevi, Pazend, Sanskrit, Pali, Armenian, Iranian, Greek, Latin, Sinhalese and various other Indo-European languages including the Celtic, Teutonic, Slavonic and other languages. Mills (67) lays indirect stress on the connection of the word Aryan with language affinity when he says: "If the history of human thought is of any importance, the Avesta claims a very prominent position in that history. It not only affords one of the oldest, if not the oldest, monument of Aryan speculation, but, in view of its enormous influence upon later Jewish and Christian theology, it must justly claim a decisive place in the development of religion and so even in the moulding and destiny of the human soul." (p. xxi) It was in Germany that the connotation of the word changed and the ball was set rolling by a German scientist Max Muller in Oxford. He later retracted from his racial theory of 'Aryan' descent (1888) but the seeds he had sown some 35 years previously grew quickly in a fertile soil and what has happened before our eyes in the name of racial bigotry is recent history.

Present Classification of Races:

Anthropologists first began piecing up all knowledge about man and then collecting the pieces to make up his history. From pure physical anthropology emerged proper systematisation, which eventually led to proper understanding of man's past history, finally ending in classification of races. Today there are no hard and fast rules in which most races can fall but there are a few broad features in which most of those forming a particular race may fall.

We have already seen how Egyptians tried to distinguish different races by assigning skin colour to them. Our systematists tried the same and developed terms like Leucodermi (white skin), Xanthodermi (brown, yellow or red skin) and Melanodermi (black skin). This was later found to be defective as regards characterisation and had presumably no genetic basis. Skin colour may be said to be due to presence of colour pigments, formation of which is governed by endocrinal activity, which is again governed by hereditary genes (Gates, 33 a). These colour pigments are found to lie in the deeper stratum of the skin and are supposed to be the result of metabolic processes in the cell (Tower, 88). Without going into the intricacies of this question we may say that this classification was found to be defective in many ways and the anthropologist had to resort to physical characters which had a far more stable basis than the skin colour. Thus by hair form we have Lissotrichy (straight hair), Cymotrichy (curly hair), and Ulotrichy (woolly hair). By head form we have Dolichocephaly (long or narrow head), Mesocephaly (medium head) and Brachycephaly (short or broad head). This is usually accompanied by cephalic index (C. I.) or nasal index (N. I.). C. I. for the three different head forms is under 75, 75-80 and 80 and over respectively. Noses may be platyopic or low, mesopic or medium and prosopic or high.

In leptorrhiny the N. I. is 55-70, in mesorrhiny 70-85, in chamae or platyrrhiny 85-100 and in hyper-chamaerrhiny 100 and over. Haddon (38 b) defines N. I. as 'the ratio of the breadth of the nasal aperture to the height which is taken from the nasion (the point where the suture between the two nasal bones meets the frontal bone) to the central point of the lower border of the aperture.'

These are the best criteria for judging most of the races on earth very broadly but there are various gradations, some fine, some distinguishable but for borderline cases they do not help much. The Parsis are according to Haddon brachycephalous, sub-head Armeno-Pamiriensis which among others contains Galcha and Tajik stocks, the forerunners of the modern Parsi — strongly brachycephalic, C. I. 85, leptorrhine, N. I. 66.8-71.3 and medium to tall in stature 1.669 — 1.689 m. An anthropometric test of the Parsis is long overdue and it is worth while undertaking it at the present moment.[*]

There is yet another classification which depends upon 'blood grouping' and is an entirely new approach to the human problem. This was noticed while developing the technique of blood transfusion. We need not go into the details of this technique. Suffice it to say that on the nature of agglutenisation or clumping of blood corpuscles by one or the other it was possible to classify four distinct blood groups, viz. O, A, B and AB. While O is the universal recipient, AB is the universal donor. There are definite genes for these types and as these are not observable characters except under microscope or in the laboratory we pass on without much comment. It may however be stated that in a group of people one or more of these blood groups may be noticeable. In the primitive groups of man blood groups A and B may be absent, still we find

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[*] From a recent anthropometric study on a small group of Parsis D. N. Majumdar (Race Elements in Cultural Gujarat, 1947) gives results that almost tally with Haddon's measurements. For a quick grasp they are compared below:—

According to Haddon	According to Majumdar
C. I. 85	C. I 82.16
N. I. 66.8 to 71.3	N. I. 65.90
Stature 1.669 to 1.689 m. or 65"—66"	Stature 167.73 cm. or 67" app.
Strong Brachycephaly.	Brachycephaly

The above comparison shows that except for a fall from marked or strong brachycephaly to just brachycephaly the Parsis have preserved their Iranian characteristics, except in the case of stature which is slightly taller.

group A in Australian aborigines together with Group O. Group A is supposed to have arisen as a mutation in Western Europe and B likewise in Eastern Asia where it is characteristic of the Mongolian peoples. While A is possessed by Western Europeans and shared with Australian aborigines, B is not shared by the Mongolians with the American Indians who are an offshoot of their stock. Again B can be found in tall and short people, in people with wavy, woolly, curly or straight hair and in white, yellow and black races. The blood group method of human classification cannot therefore be relied on.

Racial Crossing:

To-day this is a much vexed question in the world and it is of some vital importance to a microscopic community like the Parsi. We shall therefore discuss it at some length. As we have stated elsewhere man does not readily lend himself to the farmyard procedure and therefore it is not possible to do controlled breeding. It was when man through unbridled crossing began to create problems for the politician, populationist and general citizen that geneticist came to the rescue and began to study man.

Proponents of inter-racial marriages have in their armoury one very fine implement and that is hybrid vigour or heterosis. It has been observed in the controlled breedings of animals and plants and is quoted to us for man without any regard to the fact that controlled breeding in man is entirely absent. Davenport (20) studied the effect of race crossing in Jamaica, the oldest Negro settlement in America with much intermixture, yet retaining a certain amount of relatively pure white and negro stocks. His experiments and observations embraced variability due to hybridisation, nasal width, form of hair, physical traits like arm span and leg, pelvic girdle, head form, feet and hands, height, tooth decay and musical ability; also various intelligence tests like performance test, drawing by memory the figure of a man, jig-saw, Knox moron test, arithmetic test and common sense test. Of the three kinds of population, the white, the black and the brown (hybrid), the lastnamed on an average put in a poor demonstration. The blacks have an inferior capacity but whatever they possess they make use of, while the browns in spite of being somewhat superior to the blacks largely showed muddle-headedness and were incapable of taking quick decisions, though some did excellently well. Davenport believes that this is one of the results of intermingling and ultimate hybridisation—'the production of an excessive number of ineffective, because disharmoniously put together, people.' Intellectually while a few show brilliance, the rest of the hybrid race score below either of the parent race. It may be a good experiment in human hybridisation if something can be done to do away with these human wastes as we do with the unwanted seedlings in our flower and kitchen garden beds but man has not yet invented a method whereby this can be made possible. We have only to tolerate such people, if amidst us; if not, we can ask the people to stay away from biological experimentation in hybridisation.

Marriages between two unallied races have been considered by geneticists and anthropologists as harmful to either race. The Nordic, the Alpine and the Mediterranean races may marry with impunity but a union between a Nordic and a Negroid or a primitive race may produce deleterious results. Miscegenation of this sort is not desirable from many points of view. Some have been shown above. We may yet list others.

First of all the hybrid has to face a certain amount of social ostracism and consequent disabilities. These are more magnified and accentuated where an orthodox section of the donor stock stubbornly refuses to admit the hybrid to its fold.

Secondly, in certain cases, there are physical disharmonies such as overcrowding of teeth in small jaws or serious malocclusion of the upper and lower jaws. Again there is a relative disharmony between the size of the internal organs and the cross-bred with sometimes an inadequate circulatory system which militates against proper functioning leading to early death. Davenport (20) says: "Thus, whereas the whites are characterised by relatively short legs and long body and the blacks by relatively long legs and short body, some of the mulattoes have an unexpected combination of long legs and long body and others of short legs and short body. Also, while there is a high degree of correlation between leg length and arm length, some of the hybrids are characterised by the long legs of the Negro and the short arms of the white, which would put them at a disadvantage in picking up things from the ground."

Thirdly, we have in hybrids a random assortment of mental and moral complexes leading sometimes to undesirable variants in the population.

Gates (33 a) has ably tackled the above subject in his characteristic simplicity and we would refer the reader for a detailed study to his 'Heredity in Man.' He has cited voluminous literature from many authorities to prove his thesis that all inter-racial marriages — when contracted between two unallied races — are bad from all angles. We may quote here some of these authorities. Thus, Lundborg (61) from a study of Swedish conditions concludes that 'the crossing of races degenerates the constitution and increases degeneration.' Mjoen (68) says: 'Frequently in crosses between Lapps and Norwegians, especially when Alpine blood was also present, a mentally unstable type is produced, the lack of balance being shown by stealing, lying and drinking.' A similar unbalanced type has arisen from crosses between the American Indian and the French or the English. The crossing between Tasmanians and Europeans has been recorded by some as giving rise to Dravidian types unlike either parent. Gates himself says:

'Where evolution has been going on independently in these races for such long periods, and some races have progressed far beyond others both mentally and culturally, it is folly to suppose that crosses between a progressive and a primitive race can lead to a desirable result from the point of view of the advanced or even of the primitive race.'

This will show to the reader that we started with the much-discussed question of hybrid vigour and we find that the hybrid himself happens to be the focal point of attack by the scientists. Human traits, if dependent on simple factors or genes, are inherited in their pristine purity in later generations and do not behave as a 'blend.' The reappearance in a later generation is due to segregation and recombination. When the trait is a complex of many genes for instance the skin colour, then there is 'blending'. While the first filial generation (F_1) may show hybrid vigour, Davenport (20) says, 'its consequences are found scattered among individuals in later generations.' According to Crew (17) serious difficulties arise when the hybrids intercross or backcross. He says: 'Races can differ in spite of so great a multitude of hereditary factors that in the second hybrid generation and thereafter there is to be expected a veritable epidemic of variants. This in itself is sufficient to render many inter-racial mixtures undesirable.'

Many writers have referred to Hawaii as a huge experiment in human genetics; indeed, it has been considered to be the melting pot of germplasms of various races. Since Capt. James Cook, an English expeditionist, discovered the island in 1778 there has been a constant flow of emigres from all parts of the world. The ancestor of the present day pure Hawaiian is supposed to be the Polynesian, possibly Tahitian. When Capt. Cook discovered them they were about 300,000, although he estimated them at 400,000. In the year 1875 they were found to have been reduced to 55,000 owing to three causes, 1. wars, 2. diseases introduced by foreigners and 3. decadence of the old moral order (Adams, 1). Between 1875 and 1910 there was vigorous immigration and the first to arrive were the Chinese as ordinary immigrants or plantation labour followed by various nationalities and races like the Portuguese, Japanese, Puerto Rican, Korean, Filipino, Spanish and Negro. In 1930 Adams found the population to be 49.7% Mongolian, 17.7% Malayan, 15.2% Caucasian, 3.7% Hawaiian and 13.7% part-Hawaiian. He says that the Hawaiians were not adapted to assimilate a differing culture, predominant of which is either white or Chinese and, according to him, the part-Hawaiians — the hybrids — were intermediate between the two parent races, a picture similar to what Davenport drew in Jamaica.

In the above mixture of the Hawaiian islanders we have given just a few races and nationalities but in actual practice some 41 countries are involved. In spite of this the admixture is rather restricted, because the foreigner while marrying prefers a Hawaiian woman to a cross-bred. According to Dunn (27, cited Gates, 33 a) the usual triracial cross is the White-Hawaiian-Chinese. The resulting population is intermediate in measurements and shows no heterosis or hybrid vigour. According to the same author on anthropometrical studies carried out in 1928 it was found that the bodily dimensions of the European and Hawaiian were similar except for tendency towards corpulence in the Hawaiians. Features are however more Mongoloid than Europoid and although the half-bred falls intermediate between the two parent stocks his affinity lies more towards European culture and civilisation. Today Hawaii is predominantly American in her outlook on life.

The present population of Hawaii (1941) is roughly 425,000. Of these the pure Hawaiians, the descendants of original Polynesian islanders, are hardly 20,000. There are 45,000 part-Hawaiians, 250,000 Asiatics and 110,000 Euro-Americans. The latest study on these groups is that of Krauss (53). He lived on the islands for six years and his results are worth noting here since they portray the other side of the picture. He set out to see if the bodily and mental disharmonies pictured by older scientists could have any basis in Hawaii. He chose this venue for various reasons, chief of which were that Hawaii would be free from certain errors which one may find in other race-crossed countries, that there are no primitive races taking part in crossing, that there are equal rights to education and other social privileges and that the whole population lives under the influence of one culture, the American. Krauss arrives at twelve very important conclusions. He does not find true 'hybrid vigour' (Luxurieren) in the race-crossed Hawaiian. He also does not find any bodily or mental 'pauperism.' He says that as asserted by 'superficial observers' no new 'mixed race' is arising in Hawaii but 'if the present conditions of racial intermarriage continue, among the hybrids those will probably be most numerous who — though not forming one narrowly limited "mixed type" — will unite in themselves characteristics of all the three racial parent groups.' No stimulation to mutation due to race crossing has been observed but 'new forms of mankind have arisen.' Concerning intelligence Krauss says all mental groups are observable from the highly gifted (e.g. for rhythm) down to mediocre. Similarly he says there is no basis for believing that the cross is morally inferior to the parent stock. Again there have been no indications of physical disharmonies, which we have already discussed above, and there was no evidence of child-birth difficulty pointing to a normal pelvic girdle. On the subject of cultural impress on the hybrid, Krauss says the parent culture has very little influence and 'it is American Civilisation which models the main features of the character of the hybrid.' He believes there is no social ostracism or stigma attached to hybridity and the single hybrid is evaluated on the principle 'Personality takes precedence of race.' While winding up Krauss says: "The problem whether race crossing is desirable for the benefit of a whole people or not may be solved in various parts of the world in different ways, according to the bodily and mental qualities of the racial groups involved, and to the particular biological and social needs of each country."

The above conclusions are marvellous in that they strike a different note from the literature so far we have come across. However Krauss sounds a note of warning in the very beginning that his conclusions concern only Hawaii and racial mixtures in other countries may portray more or less different pictures from what he has done. He has drawn our attention to one salient fact that **no race has been primitive or low in culture** in its own way. That is one important factor in racial crossing apart from the factors of physical and mental endowment. Gates (33 b) says that the racial crosses in Hawaii produce a heterogeneous population and thus instead of there being a segregation, 'individuals with many recombinations of the various racial traits appear.'

Fantham and Porter (31) have made a similar study on race crossing in Canada. Their studies cover 50 families of foreign extraction — French, Italian, Ukrainian, German, British (Anglo-Irish), Finnish, Danish, Polish, Norwegian, Slovak-Hungarian, besides Chinese, American Indian and Negro. They come to the conclusion that most of the foreigners retain their language, food, social customs, etc., although their children do not necessarily do the same, and are easily dissatisfied with their lot. Thus communist and other literature find a fertile soil in them. They conclude:—

> "As a possible generalisation, such race admixtures do not seem really an advantage. While the families are poor, independent and hardworking, neither they nor many of the ancestral stocks are assimilating with the general population as they ought to do, if a Canadian nationality is to be established."

They go further and suggest that because of various admixtures including Central European, Ukrainian and Asiatic elements, a certain amount of stoicism, fatalism and indifference to the sufferings of others bordering on cruelty is fostered in them. They conclude that 'the Slavonic temperament is not easily assimilable with those of the Anglo-Saxon and French.' The sorry feature, according to the authors, of the haphazard movement from the rural to the city environment is the 'deterioration in moral fibre and standards that can be noted.'

The above discussion fairly goes to show that inter-racial marriages, especially when they are contracted between two fundamentally different stocks, different in their physical and mental make-up, outlook on life, assimilability of culture, adjustibility to differing environment, etc., are a failure and Gates says they create unnecessary, undesirable problems. When the two stocks are advanced and primitive, the former is 'diluted and degraded by such intermixture and primitive mental and moral characters are placed on a level with the more highly evolved.'

This again raises the question. What is a Race? We accept the genetically acceptable definition of Davenport (20):

> "A Race is a group of individuals constituting a subdivision of the species characterised by the possession of some one distinctive hereditary trait."

While a blue eye or a dark eye may constitute a distinctive character it has with it several others which may make up the constituent character of the race.

Whence and Whither Parsi !

The first part of the exclamation has been shown ethnographically and anthropologically in the preceding pages; the second part is rather intriguing. The Parsis came, a handful of them, to India 1200 years ago and have since then multiplied in the usual way. Some puerile questioners inquire, how many actually came and if they brought with them their women. Desai (24) has replied to the latter question and the former question is merely ludicrous. Even if we assume 10 families with 6 children each, which is not a large number, and if we further make ordinary assumptions of biological growth and decay (1½% nett increase every year) the Parsis would today be 26 lakhs, while they are actually 114,000. The doubting Thomases may be further told that a pair of elephants in 750 years can leave 19 million descendants and elephant is the slowest breeder, one per litter. A single nematode may lay 60 million eggs and a tape-worm one billion, starfish 39 million, and so on. This is merely for giving an idea, not by way of any comparison. But undoubtedly the Parsi of 1000 years ago was more prolific than his descendant of today.

On their entry into India the Parsis ringfenced themselves with social, sectarian and racial barriers. While the first two, which of course had come much later, are now breaking down, the last is still a rigid force in the community. Any slightest flouting upsets the whole community. A few years ago it passed through a state of electric galvanisation and hectic articulation over a naturally annoying incident. The result of marital exclusiveness within the community has led to its now being formed into an ethnic group. All scientists — biologists and anthropologists — are agreed that communal isolation in the biological sense of the term leads to formation of definite groups. Parsis have undoubtedly brought with them, inherited from their great ancestors, certain traits which after inbreeding of a thousand years have led to fixation of ethnic type different in several respects from the surrounding communities. Not that they very much differ from their sister communities in physiognomy and other respects. For if we trace their ascent through mere anthropological classification we may find their Alpo-Dinaric colleagues in Gujeratis, Bengalis and Kanarese. This is a broad generalisation. In actual practice the Parsis have kept within their own fold and have by now characterised in a special way. They therefore form an ethnic group and to trifle with it now at this stage in an unscientific manner would be suicidal. We know enough of heterosis by now and we may rule that out for the present from the Parsindu (Parsi-Hindu) or Parsilman (Parsi-Mussulman) crosses. Any blood is not worth mixing in any community. Genetically there is nothing wrong if two communities intermarry and the Hindu-Mussulman have a great future in that respect, if the hurdle of religion and social insulation can be surmounted. After all the majority of the Muslims belong racially to the Hindu fold and there are few traces of real Tatarian or Arab blood in Mussalmans except perhaps in Northern India or in isolated areas. As a preliminary to this Hindu-Muslim **entente** the caste system must go. Break-up of caste barriers will automatically release a number of men and women who find difficult to find suitable husbands and wives. This will revivify the Hindu community and the external stimulus will be still more refreshing—politically, socially and biologically. Today the Hindus form a substantial majority — a majority over all the other communities put together in the whole of India. Perhaps in the next 50, 100 or 200 years they will have to reckon with the rising number of Muslims. Today they are in a minority compared to the vast numbers of Hindus, the Muslims being 92 millions, the Hindus 254 millions. In the space of 60 years (1881-1941) while the Muslims increased by 84 per cent, the Hindus have increased only by 35 per cent. Working on these figures a writer in the "Diwan Chand Political Information Bureau"

(Bansal, 5) suggests that at this rate in 200 years the Muslims and the Hindus will be equal in numbers. In some of the provinces, especially Bengal, the Hindus are getting to be almost stationary and our advocating communal entente is not out of place.

As regards the Parsi, the position is quite different. Racially he does not belong to the large masses who form the bulk of these two communities. Biologically he has kept himself aloof from the rest of the country all these 1000 years. Socially he has evolved definitely on different lines from the various elements that make up his environment. Traditionally he still cherishes the memory of his great past and lives up to the ideal as far as possible. Numerically he is the tiniest, yet highly intelligent minority not only in India but in the whole world. **Socio-biologically this community is a wonder. No community so small in number can ever remain intact after a lapse of some 30-40 generations in contact with an equally great civilisation if not greater. It must break up or disintegrate before the final break-up. The very fact that neither of these two things has happened shows that there is something inherent in it which is worth preserving. It therefore behoves not only the community itself to keep out of inter-marriage but also the other large communities to leave it severely alone in the interests of the world at large and India herself in particular.**

The Iroquois confederacy of the American Indians some 400 years ago was the precursor of the contemporary idea of the League of Nations. The tribes that formed the league were the Mohawks, the Oneidas, the Onondagas, the Cayugas, the Senecas and the Tuscaroras. Their dominion covered the present states of New York, Pennsylvania, Ohio and portions of Canada, north of Lake Ontario. Members of one clan could not inter-marry with those of another. As Tozzer (89) puts it it was a highly evolved society in those days But with the setting of the white foot on this American Indian soil in 1609 and upwards began the slow decay. It was brought on by political adventuring with the French and the British. To-day the American Indians are a going race and not only going but mixed, getting absorbed into black and white races (Gates, 33 b). The forty-five thousand American Indians in U.S.A. are a special ward of the State. Iroquois League that was at one time powerful enough to sign a treaty with George III had the weakness to bear its misfortune in quiet by having its demands spurned by the white League of Nations in 1923. Maoris of New Zealand are but a lesser race, but the Kabyles of the Mediterranean are a loss to the world. We would urge the thinking public to see that no such misfortune befalls the small Parsi Community and it is not blasted off the earth.

To those who lightly talk of infusion of new blood by intermarriage we would quote the following from the editorial in the Eugenics Review (Vol. XXXVI No. 1, April 1944):—

> "A people must survive by its own vitality, not by inviting transfusions of new blood. It must show the will to live, the will to continue to make its own unique contribution to civilisation and culture. And this can only be done by producing itself a healthy and vigorous posterity that will carry on, and enrich, the traditions of its forbears."

CHAPTER VIII.

FROM CHAOS TO ORDER.

SOCIAL REORIENTATION THE NEED OF THE HOUR.

Concept of Eugenics:

In the preceding chapters we have discussed the patent problems besetting the Parsi community. Notwithstanding what has been said in the last chapter quantitatively the Parsis are dwindling; qualitatively there is indirect evidence to show that they are on the downgrade path. Taking stock of the situation as we have reviewed we find that these representatives of a once great race have begun to show lesser vitality than ever before, they are a prey to various mental, physical and social ills and until concerted measures are taken to check these ills we do not know whatever is going to befall these tiny people in an ocean of humanity.

India is overpopulated in the sense that the economic situation as it prevails today in the country is not at all suited to the unprecedented rise in numbers. With the rise and fall of Indian nation is linked the future of the Parsis. In the past the Parsis have contributed a great deal to the welfare of the country. They are capable of repeating the performance if they can set their house in order.

In some of the physical ills — tuberculosis, diabetes, mental disorder, etc. — one can easily perceive the hand of heredity. It is now an accepted fact that a number of diseases are inherited. From Darwinism to Mendelism and from Mendelism to modern genetics we span some three quarters of a century but the progress is full of knowledge that is beneficial to mankind as a whole. Eugenics first conceived by Galton nearly half a century ago as 'the study of agencies under social control that may improve or impair the racial qualities of future generations, physically or mentally' has now become a potent instrument in the hands of a social reformer, a democrat and a statesman. Its threefold aim covers the wide range of human welfare, viz.,

1. Endowment of good blood what we call germplasm,
2. Education or the training of the child in proper setting, and
3. Placing him in favourable surroundings.

In the course of our discussion on the fall in fertility we have observed the fall in marriage rate. In biological reproduction as conceived by modern man marriage is the pivotal point. While heredity appears as a direct sequel to biological reproduction and would ordinarily take its course, eugenics comes on the scene to weld together the forces of heritage, education and environment.

To enrich germplasm the following may be kept in mind:—

First, all those intelligent persons, who know their line should continue, must undertake parenthood responsibility personally. If racial suicide is to be avoided, this must become a religious duty of every physically and mentally healthy person. But while doing so it is an equally responsible duty to see whom one marries. Romantic infantilism should have no place in this deliberate improvement of the race, yet there is always so much to be loved and desired. Every marriage must be construed to be a human laboratory where future characters of the unborn generations are to be forged.

Secondly, all possible measures must be undertaken to ensure a happy married life to the fit and able population.

Thirdly, there shall be no social bar or hindrance in the way of the marriage and procreation of the intellectuals. Think of the loss to the community by deliberate withdrawal from marriage by lawyers, doctors, nurses, teachers and other professionals. Once a seed stock is lost it is lost for ever, unless reproduced by a chance mutation. No one should, for purely selfish motives, destroy a heritage which has been entrusted to him or her at the time of birth only for the keeping, until it is time for another keeper to arise and to be entrusted with. Intellectuals should be the last to avoid marriage and intelligent society should create a well informed opinion in that regard.

Lastly, society should try to avoid bad blood and, if possible, repress it by sexual segregation of defectives, by regulating marriage laws amongst the dysgenic, by creating popular opinion and educating public sentiment and by, if possible, adopting radical measures like vasectomy and salpingectomy, known to the lay person as sterilisation.

It is not generally realised that the main problem for the Parsi is his very small number. If the present trends of birth and death rates continue, by 1961 the community will begin to show an excess of deaths over births (see Appendix A, also fig. 1). Nobody wishes for quantity at the expense of quality but it is too true that the greater the quantity in a homogeneous population the greater the chances of having quality (vide Chapter III, page 74). However the present small number can lend itself very easily to any kind of experiment or reorientation.

Family Relations Institute: Man looks upon marriage as his personal concern, where he can brook no interference by an outside agency. The first eugenists believed in a happy, married life with abundance of children. Any kind of marriage and any kind of children are not what the present eugenist looks for. To mould popular thought and to create well informed opinion on the subject a Family Relations Institute is a necessity. It can offer courses to the young adolescents, to the would-be couple and to the young and old parents.

Mate Selection: To have talent uniformly distributed and to avoid social stratification, assortative or selective mating should be discouraged. Although it is bound to be there in some degree aim should be directed at its minimisation. Standard of judgment differs with each individual light and taste but a general knowledge of human genetics offered in the Family Relations Institute should play an important part in moulding thought towards mate selection. Differences in age, education, economic status, religiosity, etc. present difficulties but they are not insurmountable. The age of a female partner, if not unduly high, can hardly upset the biological balance of a married life. All that it does is to shorten the bearing period but given health this can also be surmounted by shortening birth spacing. The better classes should marry at an early age and leave more than three children on an average. It is not necessary that the two mates should be great intellectuals or must have had equal opportunities of educational attainment. In fact education is a matter of circumstance. Sometimes a mediocre person, due to his parents' affluence, may find it possible to take university education, while a really exceptionally clever child may find it difficult to go beyond the high school standard on account of his or her parents' monetary affliction. So long as there is a certain amount of hereditary endowment which can vouch for a happy marital life, so long is it possible to make a successful marriage in point of having eugenically sound children. The economic difficulty is the most vital factor and we shall discuss it presently. As respects religious leanings one feels quite at a loss to pronounce an opinion. It is a delicate matter, firstly because it is ingrained, inherited like any other suceptibility or tendencies and secondly because it is a matter of cultivated taste. We are inclined to put more stress on the former and it should be the aim of any family relations educational scheme to inculcate tolerance towards partners. It may be that identical temperaments may match better but it is not the universal truth and we cannot lay much stress on the same.

Help for Eugenical Marriage: On a moderate estimate the Parsi community spends about Rs. 40,000 per annum on help for marriage of poor women. This is not a small sum and it is easily an income over a capital outlay of some 13 lakhs of rupees. If a Marriage Loan programme* is launched and Rs. 1,000-1,500 are given to each eugenic couple for getting married at an early age, in about 10 years there will be about 300-400 such couples and in about 25 years some 1500 to 1800 progeny from a sound stock. Consider the gain to a small community like the Parsi. They will not only be able to take care of themselves but also of their less fortunate brethren.

Restriction of Unwanted Children: While the above scheme fosters the growth of 'wanted' children, 'unwanted' children can be avoided or kept to the lowest compatible minimum if we follow one or more of the following ways:-

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* For details see author's Parsis and Eugenics, Appendix A.

1. Propaganda amongst the dysgenic classes to avoid an early marriage and to have not more than two children. Charities should look at the question healthily and stop putting a premium on children. According to the present state of affairs the larger the number of children the easier the access to charity funds and cheap housing.
2. Teaching of the value of healthy outdoor life to women and keeping occupied in more ways than one.
3. It may be noted here that fall in birth rate amongst the poor as noticed in Chapter III may be due to early employment, possibly in teens, of poor women (some 75%) who often have a weak constitution. This can be avoided by better employment of these classes, at least the principal earners. The rise in standard of life will also have an automatic effect in lowering the birth rate.
4. The would-be couple must produce evidence to show that there is enough earning at least to support one new comer when he arrives.
5. A certain age limit for both men and women must be fixed.
6. A medical certificate of fitness should be produced. If necessary they and their near kin should subject themselves to a medical examination for suspected hereditary traits or produce certificate of medical fitness from an approved panel of doctors.
7. Contraception must be practised as long as and whenever advised by the Marriage Advice Bureau and before marriage and after betrothal the couple must have attended a social hygiene clinic.
8. There should be consultation with the bureau on the possible implications of a disease that may be running in the family of either.

9. Consanguineous or endogamous marriages should be avoided as far as possible, especially in collateral lines where there is an inheritable recessive disease.

Social Reorientation: If we wish to recreate and regenerate the community we must reorientate our social policies and programmes. The vim and vigour that the Parsi community displayed in the 18th and 19th centuries are no longer to be seen. With the increased opportunities for education and employment we have heard woes of displacement. Why? The community as a whole has seldom cared to put that question; the community as a whole has seldom put its mind and shoulder to the problem, or else we could have pulled out of it long ago. The leaders of the community have woefully neglected their primary duty. While wealth has accumulated in the hands of a few, vast numbers have been living in want. The first and second world wars saw unprecedented gains coming to a few. During the last war some millionaires became multimillionaires and a few unknown but adventurous persons shot to meteoric heights as though overnight to social and economic preeminence. The poet has rightly said:

> Ill fares the land, to hast'ning ills a prey,
>
> Where wealth accumulates, and men decay.

For of what earthly use is all this wealth to a community, majority of whose members lead a mediocre life cramped with socio-economic and socio-biological handicaps. If the leaders (sic) think they can cure the community of its ills by wishful thinking, they are living in a paradise of their own mental creation. If words could cure, the verbose pharmacopoea already prescribed by irresponsible charlatans could have done its job. But we do not want words. We want deeds. If all the untold wealth of a few were to be divided equitably not one of the lac and few thousand Parsis would remain in want. But we do not want a share in the spoils of the capitalist. We only want to give him a sporting chance to turn a philanthropist so that his memory may remain green not only in the minds of the present generation but of the unborn generations too. If the quality of the future generations is to be improved let the philanthropist come forward to control the social agencies that impair those very qualities. Time is now when charity should turn a leaf in its history and become fruitful to mankind. The old course of charity must change. Instead of merely supporting the weak and the useless to exist it should be directed to make the vigorous more vigorous, to make the healthy more healthy and to make the useful more useful so that in time to come there would no more remain weak, unhealthy, useless strains as a drag on the communal resources. Towards that end our social policies should be reoriented.

Food: Food is one of the most primary yet important of human wants. Without food none can live. Yet it is most surprising to know that our stomach can adapt itself to any amount of hunger. Chapter V provides a woeful tale of want, undernutrition and malnutrition. It is a patent malaise of a class of people who live in chronic want but as we go to the next economic grade and progress into the middle classes we find that the cost of food leaves a different effect on the families and their dependents. They cannot ask for and live on charity and yet they must feed the hungry mouths. The result is they have to forego certain other less urgent demands on their purse and to forego a number of amenities which make for a happy social life. But the still greater sacrifice is to limit the number of mouths by artificial means. Those children who ought to see the light of the day and blossom into useful citizens of the future are allowed to live in the limbo of oblivion. That is a sad eugenical loss to the community. If the middle class parent is reasonably assured that his child in his period of growth will not have to go with a hungry stomach he would be induced to have him. The Parsis do have schemes whereby school children are fed with midday meals and milk in charity schools. But that does not help the average middle class parent. Why should only a charity school child alone be fed? Why not all? If every one of the community's children were to be fed in the school, no matter to what stratum he or she belongs, even making or accepting a small charge where necessary or forthcoming it would relieve the middle class parent of certain primary responsibilities and he would be encouraged to have more 'wanted' children. The effect of organised feeding would be reflected in the health of the growing child, who in later life endowed with buoyant health will be an asset to the community.

Again the mother, the infant and the pre-school age child have suffered so far and are now suffering from an unpardonable neglect. To cater to some 5,000 children 0-5 years old and about 2,000 mothers in Bombay there are two clinics run on any but modern lines. The philanthropist is as usual callous after his philanthropy and those who steer the ship of destiny of these children and mothers are at pains to make the best of a bad bargain. There is much room for improvement and advancement along these lines. The first thing the Parsis should do is to strengthen and widen the scope of these clinics.* And not only that. There must be more of them and in various localities too, to give benefit to not just 50 mothers and children but to 500 with a follow-up programme. This will be one way of inducing the responsible middle class parent to have more children. The gain will certainly be eugenic.

Housing: Chapter IV depicts the state of housing in Bombay where the majority of the community lives. The very low economic grades of families live in houses, most of which are just a little short of hovels. The middle classes in order to live in better surroundings have to spend sometimes 40% and more of their income on rent alone and even then the kind of housing provided is miserable. In Chapter III we have expressed our doubts if small-flat housing is not one of the causes of lowered birth rate and have referred to some such condition prevailing in Poland. A similar tendency has been noted in Sweden and the government have started building multiroom apartments with subsidies to families on a sliding scale depending on the number of children in the family (Osborn, 71). Until Parsis offer housing on a better scale at reduced rents to middle class families it will be difficult to expect the birth rate to go up. There is ample land in the suburbs to build large and small garden colonies and homesteads. Some of them can be on hire-purchase system, ownership passing to the occupant in, say about 20 to 25 years. This is one very profitable way of laying out the surplus capital of the millionaire and the multimillionaire giving them a guaranteed income for a number of years, more than what government offers at present. The selection of tenants or homesteaders may be on a eugenical principle and if various other facilities like education, medical care, transport, social amenities, etc. are provided quite a number of good middle class families will be only too willing to move out of the smokeladen, smelly, gritty, dirty atmosphere. And incidentally the birth rate will get a spurt.

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* These clinics have now amalgamated with the Parsi Panchayet Health Unit, see next page.

Health Socialisation: It is now the concern of every civilised country to offer socialised medicine to the population. At present between free hospitals and clinics on the one hand and doctors who accept fees and who treat poor patients free there is much that needs improvement and expansion. In the event of a serious illness the poor can easily take advantage of a free bed in a hospital. Those who belong to better classes and cannot be admitted free to a hospital are likely to suffer in silence because the sudden and unexpected illness has meant an expenditure for which they were not prepared. In a city like Bombay health becomes a consideration in bearing children. While the poor may not pay heed to this eventuality which must befall a family some time in its life, the middle classes do give it due thought with the result that the births are restricted. Medical socialisation plan for the Parsi whether poor or affluent is today a crying need. General medical and specialised treatment, special diet and injections, hospitalisation, sanatorium and convalescent home treatment, subvention for loss of wages, medical social case work, etc. are some of the advantages medical socialisation has to offer. A scheme along these lines has been prepared by the Health and Sanitation Committee of the Conference of Charity Trusts convened by the Trustees of the Parsi Panchayet.* Its overall cost comes to Rs. 130 **per family** against Rs. 100 and more spent by western countries and America per person. In its eugenical repercussion the scheme may have a mixed result. It would design to give as much benefit to the dysgenic as to the eugenic. Burlingame (9) believes this will have the effect of raising the former class fertility by 10 per cent. To Osborn the present system of medical care in the United States appears highly dysgenic (71). Assuming that the plan of medical socialisation is as beneficial to the lower grade classes as to the upper grade ones, if it assures the latter to bear more children the ratio between these two intelligence classes will tend to be equalised. That would certainly be a eugenic gain.

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* A modified scheme has been just launched by the Parsi Panchayet, known as the Parsi Panchayet Health Unit.

Family Club: Properly designed recreation is a **sine qua non** of a well-knit social and biological life. Hardly enough attention has been paid to this problem. Usually clubs are designed to cater to individual interests or group interests—such as men, women, etc. There are hardly any clubs where whole families can go along with their children. In such clubs the father, mother and children have not only an opportunity to watch those of their own age and sex but of all ages and sex so that the influence exerted on one another is healthy and conducive to normal biological growth. Such a club is more in need in a city like Bombay than in any mofussil areas and small towns, where there is a greater opportunity for people to know almost all persons. In Bombay people live in far-flung areas and unless they come together in a club of this sort they cannot be expected to know one another well. There are about 12,000 Parsi families in Bombay. To design a club to accommodate all these families in one place is out of the question. The experiment may be made in a modest way keeping room for future expansion, or there may be more than one club in different localities. In England a similar club is in existence at Peckham (Pearse, 74) and although we may not follow this experiment entirely we may introduce many of its best features. The stress is generally on the smooth family life and an opportunity for young adolescents to find life-partners whom they have had enough time to observe at work, play, social life, etc. The Peckham club consists of a swimming bath, a gymnasium, a play room, a theatre, a library, a cafeteria, a nursery, a workshop, etc. This would automatically provide amenities and educative material for all ages and for both the sexes. There is ample opportunity for social action and interaction and ample scope for healthy development. Such a club offers above all things a periodic physical overhaul for every member. This overhaul is not made with a view to find out what is wrong with the persons but with a view to tell them what is right for them.

Intelligence: In the past the Parsi community has produced highly gifted persons, leaders of social, political and industrial awakening. In the ordinary walks of life too the Parsi has been able to recruit and supply in the past quite an army of able workers. If in the present we do not find Parsis occupying key positions everywhere, is it because intelligence is dwindling? And has this problem a genetic basis or merely environmental? If the former, it is a difficult question; if the latter, not impossible. Intelligence is primarily a function of the brain and, as such, depends on its structure and organisation. Besides it is a complex function and varies with age and from person to person (Burlingame, 9). It is true that ability runs in quite a number of Parsi families and some have produced more intellectuals and able persons than others. But the question arises whether intelligence in the community is distributed evenly appearing by laws of chance or is it segregated in one specific stratum and showing signs of low grade intellect in another. We have no data to prove one way or another and it is no use conjecturing until they are available. We would suggest a survey of intelligence in the school-going Parsi population to gauge the fund of intellect still available for tapping in the future. If the sociologist is to be set wise and the geneticist given an opportunity to indicate planning this is one of the urgent problems. Intelligence Quotients (I.Q.) and Indices of Brightness (I.B.) must be known before a start is made. An equal opportunity must then be afforded to all the children of upper grade level to develop their intelligence and personality, no matter to what social stratum they belong. Today it would appear too many of the upper economic grade take an education disproportionate to their ability and are in consequence not capable of making the best use of it, while quite a number of children from the lower economic grade with enough ability have no opportunity to develop it. A similar situation prevails in England too (Gray and Moshinsky, 36) but the Parsis can rectify this situation early if they know how and where they stand. If a person is to be made socially fit, his intelligence and personality must be developed to the full. The Parsis have funds running into more than a crore of rupees which are meant for technical education. It is true we are soon going to enter a technological era and we would like to foster and develop innate capabilities to serve the time but it must be borne in mind that the entire genius of the community cannot be made to subserve that end. As it is the persons who administer these funds find that 'too few' come up to take advantage of 'too much of a good thing' and consequently the funds have to be piled up from year to year because they cannot be utilised for any other purpose except for giving scholarships to individuals. While making charities it is usually not realised whether it will serve a fruitful end and while administering them resilience is not kept in mind. If the trust deed cannot allow it, then it is up to the administrators of these funds to go to the court and remove their fetters. If social competence and social fitness of a large part of the population are what these funds aim at, then the hands of their administrators must remain free. Then alone the community will begin to have its influence once again felt in the social, political and economic spheres of the country.

Intelligence and Personality: We have above referred to development of intelligence and personality. This is not a simple task. While intelligence is inheritable, enough is not known about the inheritability of personality (Scheinfeld, 83). Environment plays an important part as a growth factor in the development of these two qualities. While intelligence can be measured, there is no adequate tool to measure personality. It is a variable and displays itself in a variety of ways (Schwesinger, 84). We can therefore lay stress on the environmental factor in so far as the appearance and proper functioning of personality are concerned. And the larger the number of population with fully developed intelligence and personality the greater the chances of that population taking its rightful place in leadership. How this can be achieved is a matter for the eugenist and the psychologist. The resources of the community should be harnessed towards the achievement of this end.

Social Security: We would be striking a very optimistic note if we imagine that India will be in a position to introduce social security plans in the next generation or so, on the lines of the American, New Zealand and English plans. United States of America with her untold wealth has not achieved all that social democracy desires for her 130 millions. Russia has done a good deal but even that is not all that is desirable for her 190 millions. If we can imagine that we can presently achieve something for India's 300 millions we are, we say again, striking too optimistic a note. Before that is done the purchasing power of the individual must be raised and to raise that we need technological advancement. There should be minimum unemployment and employment of a person must be for the maximum tenure of his life so as to be able to pay enough from out of his earnings for the security plans. Under such circumstances it may be perhaps possible to achieve something for the Parsis by the Parsis themselves. With the help of several funds which give maintenance allowances it may be possible to put up old age annuity and pension plans. There may be some difficulty in the beginning but if the elders care and if the wealthy consider it a sacred duty to help the difficulty is not insurmountable.

Research Facilities: To a westerner who is used to thinking in terms of millions while talking of population research, a paltry hundred-and-fifteen thousand would present no problem. The whole community could be divided into about 25,000 to 30,000 families all told. If a proper statistical record is to be kept it can be easily done on the Family-Individual-Index Card System. If Netherlands could do that for a million (Methorst and Lentz, 66) Parsis can do so with relative ease provided every family co-operates in this voluntary pooling of human knowledge about a gifted community.

A Word of Caution: While we are suggesting methods of biological approach to social problems a word of caution is necessary. First of all these suggestions are mere indications. Secondly their realisation should depend on how much wilful effort the community can put into it and how far it can remain in manageable proportions. The number of the community is a manageable number. All that, therefore, remains is its will-power to live and work for an ideal.

CHAPTER IX.

SUMMARY AND CONCLUSIONS.

The history of the Parsis after their entry into India 1200 years ago is meagre. It is from 15th or 16th century onwards that we begin to hear about them. With the rise of Bombay they began to migrate to the island and before that there were some Parsi settlements in Chaul, Thana and Kalyan. Rise of the Parsi is synchronous with the rise of Bombay and to some extent vice versa. It was the Parsi who first fell in line with the Western education: it was the Parsi who was the promoter of industries: it was the Parsi who supplied, with other communities, the pioneering type to Bombay and several filled the ranks of merchants, traders, businessmen, bankers, brokers, financiers, educationists, medical profession, legal profession, etc. By the beginning of the 20th century the Parsi was firmly established with his several institutions, social, religious and charitable. Nearly 57% of them were to be found on the island alone. But no sooner had they got stabilised than did their worries begin. Politically, socially, biologically, socio-biologically and in many other ways the Parsi needs revitalisation.

While the whole world passed through a period of growth the Parsis perhaps felt the same urge but for the last 50 years or more there has been a slow diminution, as witness the falling birth rate. Various reasons are adduced. Age distribution, sex ratio, marriage, urbanisation, etc. are some of the preliminary factors that count. Bombay is one of the worst congested places in the world and the average Parsi, more than half in the city, lives in congested, unhealthy localities. Cheap housing has not been able to meet more than 33% of the demand.

It is significant to note that the Bombay Parsis have fallen by 50% in their birth rate over what prevailed in the beginning of this century. Had it not been for a corresponding fal in death rate the Parsis would not have shown the rise they have done in the past few decades. A part of the Bombay increase is due to migration whose rate appeared to be 20 persons per year depending upon the computed figures for 20 years following the Census of 1921. India as a whole has a different story. While her death rate has fallen her birth rate has remained stationary at 33-34 per 1000 of living population. Parsis stand no comparison with the rest of the population. While several of the principal factors shown above have been responsible for the fall in birth rate, there have been others too that have assisted simply or in conjunction with others to bring about the phenomenon of fall in birth rate. Fecundity and fertility, sex relationship, education, emancipation of women, prosperity and general outlook on life are some of these factors. **That there are fewer children born every year is unmistakably shown by the dwindling number of children in age group 0-5 (Table 5, Fig. 2) and the same is reflected in the changing mean age from 29.4 to 30.6.** This has a very significant effect on raising families. At age 24 the expectation of life in India is under 25 years. If that also applies to Parsis,* then the delay in marriage reduces it to a short span of life. The structure of the community is easily understood by the Sundbargian formula. According to that strengthened by Whipple's additional categories the Parsis are now reaching the stationary point. Evidently they appear to be nearer accessive than stationary point but it would appear they are unmistakably moving on the accessive-stationary axis.

The fertility of a community can be gauged in many ways but the best guide would be the number of daughters left by mothers or females of reproductive age in a generation. While no reliable data are available for the Parsis **it would appear from all circumstantial evidence that fertility is falling.** Contraception may as well be responsible for this phenomenon and it would appear even the poor have taken to it. If contraception were wholly unknown or eradicated, would the community revert to its original fecundity is a moot point. **As far as general health is concerned the Parsis enjoy good health.** They have the largest number of persons living above the age of 60 compared to other communities. General mortality is fairly low, less than half total Indian mortality. Nearly 25 per cent of the Parsi deaths are due to influenza, pneumonia.

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* p. 32 q. v.

diarrhoea, dysentery, enteritis, sprue, kidney trouble and tuberculosis. 19 per cent of the deaths are due to heart-failure, but all these may not be due to actual diseases of the heart. 10 years ago typhoid was responsible for 60 per cent of all deaths by fevers. Today it remains the same. In spite of the fact that Bombay was very much congested during the war, the city has maintained its health as reflected in typhoid cases and that speaks of the municipal effort in that direction. Tuberculosis seems to spread at an alarming pace in the community and the leaders had better beware. **In point of physical build the Parsis as seen from a sample obtained from an insurance company compare fairly well with other Indian communities and foreign nationalities** but of course the sample is too small to allow of any generalisation and there is every reason to believe that **measures to rebuild the community's body and health are called for.**

With urbanisation of the Parsis to an unprecedented extent many a malaise peculiar to city life has become prominent. **The average number of children born to a family is falling and the fall is evident in the poor as well of today as compared with the same class of people 10 years ago.** While it is true that people in the lower economic grades marry early there is a distinct bias in general amongst the Parsis to prolong or delay the marriage age, so that a certain differential is bound to creep in between two types of population. The latter class being the abler class the differential becomes more significant. **Education plays some part in prolonging marriage** age and this is very much true in the case of women. **Those who choose a career to family rearing more often than not go without the latter. In general the spirit of 'arrivism', the spirit that is a concomitant of our present capitalistic world, is to a great extent responsible for so much decline of fertility.**

Question of poverty has for quite a long time now engaged the attention of the Parsis of Bombay. **Some 40 per cent of the Parsis in Bombay live round about the line of poverty.** That knocks the bottom out of the argument that the Parsis are the most affluent of Indian communities. Perhaps at one time they were; perhaps the standard of life adopted by the Parsis is responsible for this notion. If we adopt the foreign standard of poverty we would find some more lapsing into it but judging by our standard we are sure the present number is a fairly big one. Their income is meagre and the relief given to them still more meagre. **More than relieving, it embarrasses them: it leaves them, with the lapse of time, minus morale — the very thing which should be preserved at all costs. If the wooden system of charity relief ends in this, then we say the community will be better off without it except in case of those people who in civilised countries would ordinarily be a burden on the public and whose care should, in the case of the Parsi, be a sacred trust for the charities.**

With 80 per cent of literacy amongst the Parsis we are sorry to note that a number of them are ill fitted for a job that can maintain a family of husband, wife and two children. It is this class of people underemployed in relation to its family commitments that creates a problem for the community. Recently the Parsi Panchayat Trustees called a conference of several trusts who appointed **ad hoc** committees to report on charity resources pooling and planning for the future with a view to reconstruct the entire body social. The reports of these committees contain valuable suggestions and the community will do well to follow them up.*

The poor Parsi's diet is poorer than the poorest American diet. While the lowest meal value of the latter is a little over 4 annas, for the former it is 2 annas. Perhaps the generality of the Indian diet is still lower but no working class family in a city can maintain itself normally on such a small or poor ration. The result is debts in many a case to maintain a certain level: in still many others a breakdown of health. **The worst sufferers are children.** Although charity and semi-charity schools provide mid-day meals to a number of children and also milk and porridge to some, **the pre-school age child suffers a great deal for neglect at home and for dearth of clinical facilities in the community.**

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* The Vocational Guidance Bureau, the Central Employment Bureau and the Health Unit have already begun to function.

War-time deficiency in diet has created a number of ills and the opinion of the medical profession in this respect provokes anxiety. It may be stated that during the war the Parsis did mighty little for the well-being of the poor who were 50 per cent inadequately fed even during normal times and as **for children their neglect has been almost criminal.** If some of them grow up weaklings or prone or prey to various diseases in adult life the present generation of elders will have to take the blame.

Major causes of poverty and destitution amongst the Parsis can be summarised as follows:—

(a) *Failure to meet all social and economic demands of a family within the total earned income.*

(b) *Failure to provide for a future contingency by way of assurance, savings, etc.*

(c) *Failure to accommodate standard of living within the total earned income where the upper limit is circumscribable without any serious difficulty.*

(d) *Failure to discharge social obligations properly. for instance those of husband to wife, son to father or mother, affluent person to indigent relatives, etc. and vice versa.*

And while the poor amongst us grow in number our charity funds are helplessly looking on. **Time is now when individualism has to be shed by all charity funds and every one must act in concert for the common weal.**

And thus we find ourselves at the cross-road. While **the affluent classes move their own way, the lesser able — economically and intellectually — are taking a different way.** Child patterns have arisen and **small family pattern has become the mode.** The virus has infected even the poor as can be seen from the child patterns of 117 completed families. It may even be that once better class families have, with the wheel of fortune, sloughed into the mire of poverty. Whatever the disease the symptom is there. While the charities cannot keep pace with the growing number of the poor, the poor have their own problems. If it is the abler classes who are limiting their families and the lesser able have a larger rate of reproduction, **in the space of a hundred years or so the lie of the community will change.** The latter will largely outnumber the former and worse problems will arise then.

The Parsis of the present day are descended from their Iranian ancestors who at one time owned a large and rich kingdom and no less a culture. While imbibing a large amount of environmental influence in India for the last about 1000 years the Parsis have kept up some of the main characteristics which characterised their forefathers. **Thus cheerfulness, courage, diligence, loyalty, justice, tolerance, straightforwardness, generosity, wastefulness not actual wastrelism, prodigality, love for luxury, gaiety, amiability, hospitality, boisterousness, alternating fits of hilarity and despondency, etc.** are some of the characteristics which most of the Parsis still possess, whether for good or for bad. Some of these traits are definitely worth preserving. The Parsis have ethnologically kept themselves aloof from the main Indian population, which is the one reason why their traits are still to be found as a complex inherited from their great ancestors. The present day Parsi must therefore strain every nerve to preserve them and hand them down to posterity.

In the previous chapter we have seen how we can grope our way out of the chaotic state of affairs. In the past the Parsis have talked and written a great deal but very little tangible has been done. **We cannot all at once open the portals of a heaven and ask the small community of Parsis to walk in. There is no magic wand, no 'open sesame' which can work miracles.** The Parsis have themselves to put their shoulders to the wheel and make a supreme effort. **There are rich Parsis with millions at their disposal. The community needs their help at this very crucial hour and whatever they spend now will be a gilt-edged investment for the future.** Many a problem awaits the philanthropist, the sociologist, the eugenist, the statesman, the man-in-the-street, the woman-at-home and every one else who considers it his or her sacred trust to help the community.

Culturally, politically and socially the future of Parsis is indissolubly linked with the Indian masses. They cannot expect a favoured treatment and they have never asked for it. They are self-reliant and they will do all they can to help India attain her complete stature in the polity of nations. A highly literate and culturally advanced community cannot claim to be a protected ward of the state like the Red Indians of America or the Natives of Australia. But they can legitimately claim to receive fair treatment from their compatriots. If they are assured of that, the Parsis are capable of taking care of themselves with all the resources at their command.

For Appendix A see page 45.

APPENDIX B.

A Schedule for the Study of Fertility Trend of the Parsis.

(See Chapter III page 54).

1. Name of Hospital:
2. Obstetric No.
3. Date of Delivery:
4. Legitimate or Illegitimate:
5. Denomination: Priestly|Laity.
6. Was patient engaged in any gainful occupation at home before marriage? If so, what?
7. Was patient engaged in any gainful occupation outside the home during marriage? If so, what?
8. Patient's health up to marriage:
9. Patient's health since marriage:
10. Is patient a resident of Bombay for more than 10 years?
11. Is patient's husband a resident of Bombay for more than 10 years?
12. If not, when did patient migrate from mofussil?
    Name the place:
13. When did husband migrate from mofussil?
    Name the place:
14. Patient's Education : (Illiterate) (Middle School) (High School) (College) : Husband's Education

Patient's Education	:	(Illiterate) (Middle School) (High School) (College)	:	Husband's Education

(N.B. Tick on each side for indication.)

15. Date of Birth of Patient:
16. Date of Birth of Husband:
17. Place of Birth of Patient:
18. Place of Birth of Husband:
19. Date of Marriage:
    (Dates of second marriage, etc. to be also given)
20. Whether patient is full paying, part paying or free:
21. Occupation of Husband:
22. Economic Position: Very Poor. Poor. Moderate. Well-to-do. Rich.
    (**N.B.** Tick off appropriate head.)
23. Has Patient any gynaecological disease? If so, specify.
24. Has Patient had any pelvic surgical operations? If so, name them exactly.
25. Has Patient ever used any method of contraception? Yes—No.
26. Has Patient ever had self-induced abortion? Yes—No.
27. Has Patient ever had abortion induced by some one? Yes—No.
    (If answer is in the affirmative in either case, please describe the method used.)
28. Reproductive History:
    (including present admission)

Pregnancy	Year	Result
1.		L. S. M. T. O.
2.		L. S. M. T. O.
3.		L. S. M. T. O.
4.		L. S. M. T. O.
5.		L. S. M. T. O.
6.		L. S. M. T. O.
7.		L. S. M. T. O.
8.		L. S. M. T. O.
9.		L. S. M. T. O.
10.		L. S. M. T. O.

L: Live Baby. S: Still Born. M: Miscarriage.
T: Therapeutic Abortion. O: Other Abortion.

Notes

Details of Methods Used for Contraception.

(To be filled in as accurately as possible)

Method	Check use	How long was each of specified methods practised	What is patient's opinion as to effectiveness of methods used
Coitus Interruptus (Withdrawal)			
Condom { Rubber Skin			
Pessary alone			
Pessary with Medicated Jelly			
Pessary with Douche			
Medicated Vaginal Suppositories or Jellies*			
Douche Alone — Water			
Douche Alone — Medicated*			
Intra-uterine Mechanical Device*			
Safe Period (abstinence during certain part of month)			
Any other Method*			

* Specify kind here.

This form has been filled by:

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